FacilityPro Manager　　　　　　　User Manual

filename:	MAN7 FPMU UKED 3710.doc
revision date:	09072014
software version:	3.7

MAGNA CARTA
CHIPCARD SOLUTIONS
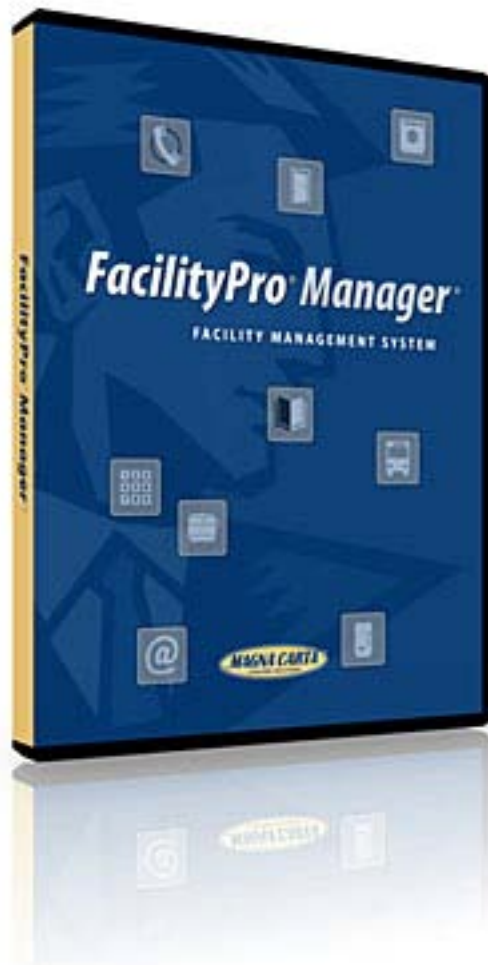
You must accept the enclosed License Agreement before you can use this product. If you do not accept the terms of the License Agreement, you should promptly return the product for a refund.

System requirements:

To use FacilityPro Manager on a PC you need:

1) Microsoft Windows XP, Windows 2000, Windows 2000 Server or Windows 2003 Server. For the Collector module (needed if data collection from the terminals and configuration of the terminals must be done automatically) Windows 2003 Server is recommended;
2) Supported Microsoft SQL Server versions: 2000, 2005, 2008 and 2008 R2. The Express edition of 2005, 2008 or 2008 R2 can also be used;
3) 512 MB RAM
4) 50 MB available hard-disk space, plus additional hard-disk space if the PC will be storing the database and/or reports
5) CD-ROM drive
6) VGA card: minimum VGA 640x280, 64K colors
7) Microsoft Mouse or compatible pointing device
8) Free USB-port for (optional) card reader
9) TCP/IP-network and 100 MB network card required if FacilityPro Manager is to run on more than one workstation with one central database or if the terminal data is to be collected and the terminals are to be configured via the network.
10) Software COMET and HP iPAQ PDA are required if the data from the (stand-alone) terminals and the configuration of these terminals is to be done manually.

For more information:

Visit the Magna Carta Website at http://www.magna-carta.com/

TABLE OF CONTENTS

About this user manual

This is the FacilityPro Manager (FPM) user manual (version MAN7 FPMU UKED 3710.doc), based on FacilityPro manager version 3.7.10.81. This manual can be used in different ways. It can be used as a textbook or as a reference book or it can be viewed on-screen while using FacilityPro Manager. We recommend that you read through this manual from beginning to end before getting started with FacilityPro Manager. You will then know which tasks can be done with FacilityPro Manager and how to operate the program. Once you have started working with FacilityPro Manager, you can always use this manual as a reference book when you need to refresh your memory on how to perform a specific task.

Within the text of this manual there are many cross-references, giving paragraph number of the paragraph in the manual where you can find further related information. If you are viewing this manual on-screen from within FacilityPro Manager clicking on the references (paragraph numbers) will take you straight to that paragraph.

Some of the chapters of this manual will be of less interest to you if they are not applicable to the specific electronic transaction system you are managing with FacilityPro Manager. If your system is installed and maintained by a dealer, you might never have to perform certain tasks.

The set-up of this manual follows the structure of the menus and menu options of FacilityPro Manager. Tasks that you will perform often, once the system is up and running, are described at the beginning of this manual. At the end of this manual, tasks that are generally performed infrequently will be explained. When setting up the system, however, tasks will be carried out in the opposite order. This is often done by a dealer.

Because of this reversibility of the manual, you will find that the instructions for a specific task are often preceded by a warning that certain other tasks must have been completed first, before performing the task at hand.

When the text presents an enumeration that does not represent instructions to be carried out, this enumeration will be presented as follows, each item identified by a number and a bracket:

1) First point.
2) Second point, etcetera.

In each chapter, except the introduction, you will find instructions on how to perform the various tasks that are supported by FacilityPro Manager. These instructions always have a title which starts with **How**, for example **How to start FacilityPro Manager:**. The instructions for the specific task are then given step by step, in the order in which they will be carried out, each step identified by a number and a full stop, as follows:

1. Step 1.
2. Step 2.
3. Step 3, etcetera.

These instructions suppose that you, the user of FacilityPro Manager, have some experience with computers. For the sake of completeness we will explain here some of the terms used in the instructions:

1) 'Click button name' means move the mouse to the button on the screen specified in the instruction, and press the left mouse button. The name of that button will be given on a grey background, so that it will resemble what is seen on the screen. For example: Click OK.

2) 'Click' means move the mouse to the area on the screen specified in the instruction, and press the left mouse button. For example: Click the tab 'Access'.

3) 'Double-click' means move the mouse to the area on the screen specified in the instruction, and press the left mouse button twice quickly.

4) 'Right-click' means move the mouse to the area on the screen specified in the instruction, and press the right mouse button.

5) 'Choose' will only be used when a menu or menu option is to be chosen. The menu or menu option is printed in bold characters. For example: Choose menu **Cards**, means click the menu **Cards**.

6) 'Select' means click the specified item. Its background will become blue and the item has then been selected. For example: From the record list, select the record that you want to delete.

7) 'Press' always refers to the keys on the keyboard. The keys will have the format **<Tab>**. For example: Press **<Tab>**.

8) 'Type' means enter data with the keyboard; the text that should be typed is presented in bold characters and between quotation marks. For example: Type the name of card holder **'John Johnson'**.

1   Introduction

This chapter provides a general introduction to FacilityPro Manager.

1.1   FacilityPro Manager

FacilityPro Manager is the back-office software designed to support the administrator of a site and guarantee easy and effective site management. A site is a location, for example a university or hospital, possibly spread out over several buildings, where a cashless payment system is in use. People can purchase products or gain access by presenting a FacilityPro smartcard, a MiniTix wallet or a Chipknip at a FacilityPro terminal. Examples of such electronic transactions are purchasing coffee or snacks from a vending machine, making photocopies, or gaining access to the parking garage.

FacilityPro Manager allows the user to manage the facilities on site efficiently, improve the quality of the services offered and better tailor them to the customers. FacilityPro Manager has a modular structure, allowing the modules PayPro, AccessPro, CardPro, PowerPro, CardPro Interface, PIM, Autoload, MiniTix, Chipknip and the Collector module to be activated or invisible, depending on the requirements of the site. The majority of the modules are included in the standard version of FacilityPro Manager, but the modules CardPro and CardPro Interface need to be purchased separately.

FacilityPro Manager also makes it possible to monitor the site closely: every chipcard transaction is stored and reports can be generated that present detailed overviews of the transactions that have taken place.

PayPro and AccessPro
One or more of the available terminal modules will always be activated in FacilityPro Manager: PayPro if there are payment terminals and AccessPro if there are access terminals. FacilityPro Manager allows the site administrator to:
1) define products and prices
2) configure the terminals (payment terminals, reload stations and/or access terminals)
3) define zones (a zone includes one or more access terminals) and assign the right to gain access at the terminals within a zone to individual FacilityPro cards or to all the FacilityPro cards
4) collect the turnover data and other relevant information about the use of the terminals
5) generate reports about the use of the terminals, such as turnover reports and reports showing the transactions effected at a terminal
6) check how much money was in the e-purse of a defective, lost or stolen FacilityPro card
7) add lost or stolen cards to the hotlist so that they become unusable (blocked) when presented at a terminal
8) define different levels of authorisation within the software per administrator

CardPro

If the CardPro module is included, the site administrator can also:

1) read cards
2) encode new cards
3) re-encode existing cards
4) edit the e-purse balance on cards
5) unblock cards that have been locked off the system

PowerPro

The PowerPro module of FacilityPro Manager allows for many user groups as well as cost centres to be defined, so that a more complex terminal configuration can be realised. User groups may have multiple special privileges (called rights). Thus, certain user groups might be allowed to purchase certain products at a discounted price, or have the right to access certain areas at certain times. For instance, in the case of a school, there might be a user group 'students' and a user group 'staff'. Staff might be assigned the right '5 free coffee per day'. Transaction data stored includes the cost centre, allowing for through billing.

If the PowerPro module is included, the site administrator can:

1) define user groups for price differentiation. E.g. pricing can be set at different rates for different user groups, or products might be available only at certain times
2) record personalized privileges (rights) such as free sale, discount or budget for certain products
3) assign multiple privileges (rights) to each user group
4) assign the right to gain access at the terminals within a zone to user groups
5) classify cards and card holders into cost centres for accounting purposes
6) generate a range of detailed reports about the use of the terminals, such as total amount of discount allotted per cost centre or per user group, which can be used for invoicing

CardPro Interface

The CardPro Interface module is necessary if you want to interface with a desktop card printer and card personalisation software. This allows you to produce your own FacilityPro cards in a single pass through.

PIM (Post Issuance Management)

The PIM module allows you to make changes to the FacilityPro cards on site without actually having the card in hand. These changes can be:

1) adding value to the card balance
2) changing the user group or cost centre a card belongs to
3) adding value to the counter of a token on the card
4) unblocking a card that has previously been hotlisted and then blocked

The changes are stored in the FPM database and effected when a card is inserted at a terminal.

Autoload

The Autoload Server (ALS) module of FacilityPro Manager allows cards to be automatically reloaded when inserted into a networked FacilityPro payment terminal in accordance with a

credit amount stored for that card in a file that is generated by an external administration system on the back-office computer. The amount can be different for each card or cardholder.

MiniTix
If MiniTix wallets are accepted at the terminals of the site, the MiniTix module of FacilityPro Manager is required.

Chipknip
If Chipknip is accepted at the terminals of the site, the Chipknip module of FacilityPro Manager is required for communication with the acquirer Equens, unless the Chipknip payments will be transmitted to Equens directly from the terminals.

Collector
The Collector module of FacilityPro Manager collects the data from the terminals that are networked automatically at predefined times (e.g. every hour). This module is installed on a PC (preferably Windows Server), and runs as a service.

FacilityPro Manager is installed on one or more computers or workstations. The heart of FacilityPro Manager is a database that consists of a great many tables, which contain all the data of the electronic transaction system. For instance, there is a table of card holders, with the names and addresses of all the card holders, a table of cards with all relevant data for each card, a table of terminals where the cards can be used, and a table of transactions, with the details about every transaction.
The persons who use FacilityPro Manager we call administrators.

We call the people who have a site-specific FacilityPro smartcard the card holders. Besides machines where card holders can pay for products or get access to specific areas, there are also machines where card holders can revalue their cards (i.e. increase the balance on their card), buy a new card, or hand in their card. All of these machines, we call the dispensers of the site. Each dispenser is connected to a so-called terminal, which consists of two components:

1) The Magnabox: keeps track of the transactions effected at the dispenser. The Magnabox communicates with FacilityPro Manager, with the dispenser and with the card reader.
2) The card reader (card/user interface): smartcards will be inserted into (or presented at) the card reader. The card reader can be an Atlas 4 or another card reader. Most card readers have a display, where the card holder can read the necessary instructions and information. The card reader communicates only with the Magnabox.

In order to perform all the tasks described above, FacilityPro Manager must communicate with the terminals. Generally communciation is via a TCP/IP network, or via a PSTN or GSM/GPRS modem.

If the terminals are not connected to a network (stand-alone terminals), communication with FacilityPro Manager is executed via a USB stick or using a PDA (Personal Digital Assistant) Pocket PC and COMET, a software developed by Magna Carta for PDA's[1].

Magna Carta terminals accept FacilityPro cards which are proprietary and feature a 'closed' electronic transaction system 'FacilityPro', developed by Magna Carta.

FacilityPro Manager is parameterised and configured for each site to include the terminals installed, the products and prices, the cards, card holders, user groups, cost centres, rights and privileges, etc. Each of the modules described above can be added to FacilityPro Manager at any time.

Figure 1-1 shows a schematic overview of a site.
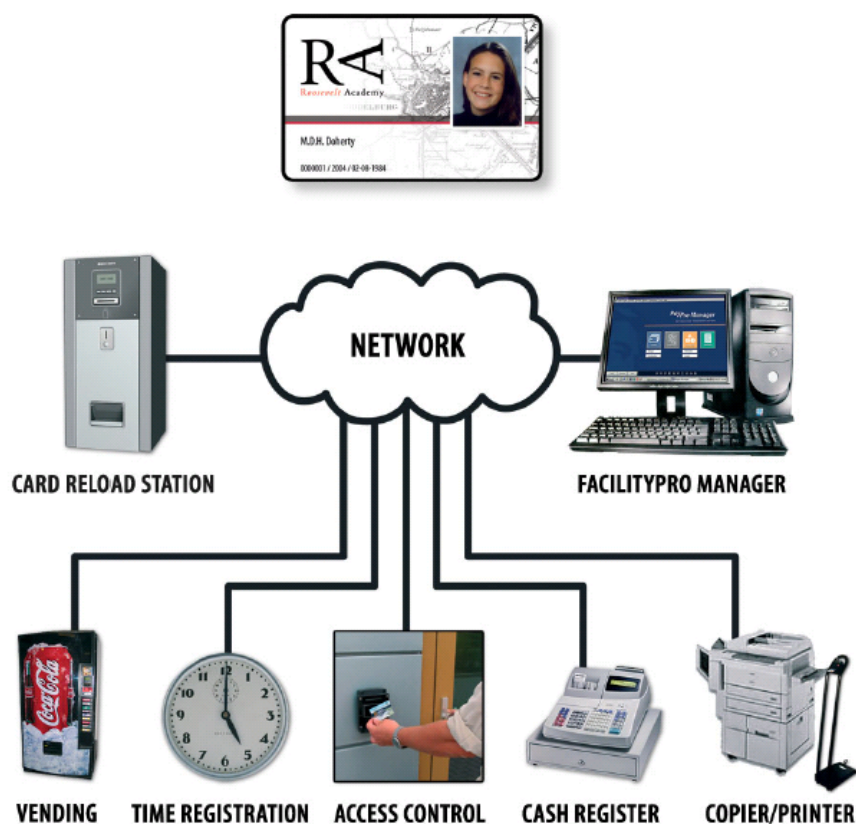
Figure 1-1 Overview of a site

1.2 List of terms

This is a list of terms, which you will come across when performing the various tasks of managing the site. We recommend that you read it through once to gain a better

---

[1] This solution is no longer available but still in use at some existing sites

understanding of the structure of a site. Mostly, however, you will use this list to look up the meaning of terms you come across in the remaining sections of this user manual, and that you do not fully understand.

1) Access list: a list of card numbers that is sent to the access terminals as a part of their configuration. When a card is presented at the card reader, the access terminal will only grant access to the card holder if the card number of that card is on the access list of that access terminal.

2) Administrator: someone who is authorised to work with FacilityPro Manager. To be able to log in to FacilityPro Manager, the administrator must have a login-name and a password.

3) Administrator group: a group of administrators with the same level of authority within FacilityPro Manager.

4) Autoload: automatic reloading of cards when they are inserted at a terminal. The Autoload Server (ALS) module of FacilityPro Manager allows cards to be automatically reloaded when inserted into a networked FacilityPro payment terminal in accordance with a credit amount stored for that card in a file that generated by an external administration system on the back-office computer. The amount can be different for each card or cardholder.

5) Block: to make a card unusable. This is done at a terminal. This will happen when a card that is on the hotlist is used at any terminal.

6) Card: a smartcard.

7) Card holder: owner of a card.

8) Card reader: see card/user interface.

9) Card status: a field in the card table indicating whether a card is or is not 'personalised', 'issued', 'hotlisted', or 'blocked'. If the card exists only in the database, and not as a physical card, the card status will be 'no card'.

10) Card update: a tab of the card data screen visible only if the PIM module is active, that shows records for all changes made to the selected card using PIM, and the status of the change.

11) Card/user interface: that part of a terminal that provides the interface between the card holder and the terminal. Mostly referred to as card reader. The card reader is connected to the Magnabox, and sends and receives relevant information to and from the Magnabox. FacilityPro terminals have an Atlas 4 card reader. A card holder inserts his card into the card reader (or holds his contactless card in front of the card reader) and on the display of the card reader the card holder can read the necessary instructions or information The card reader reads the card, for instance the card number, the balance and the tokens on the card. The card reader also writes on the card, for example a changed balance after a transaction, or it can block a card that is on the hotlist, preventing it from being used at other terminals.

12) Chipknip: an 'open' electronic transaction system for the Dutch market only operated by the acquirer Equens. If Chipknip is accepted at the terminals of the site, the Chipknip module of FacilityPro Manager is required for communication with the acquirer Equens, unless the Chipknip payments will be transmitted to Equens directly from the terminal. Terminals that can accept Chipknip are only available for the Dutch market. Chipknip is the electronic cash system or open Dutch e-purse used in the Netherlands. Chipknip will be phased out and will be end-of-life as of 1-1-2015.

13) Collector: a module of FacilityPro Manager that seeks connection with all the terminals on the site connected to the network at regular intervals, for instance every hour. The collector then collects information about the transactions effected at the terminals/dispensers (terminal data), and makes the necessary changes to the configuration of the terminals. The collector module is always on one particular workstation. This workstation is also called the collector, as the collector function is usually that workstation's only function.

14) Configuration: all the information that a terminal needs to operate correctly (for example prices of products, hotlist, list of rights).

15) Cost centres: a subdivision of card holders for budgeting purposes, making it possible to link up to financial administration systems or automated billing systems of third parties. FacilityPro Manager can produce standard reports on the transactions effected per cost centre and on the turnover data per cost centre.

16) Database: a collection of tables containing all the information FacilityPro Manager needs to operate. The database also contains the data on all the transactions effected.

17) Dispenser: a machine that provides one or more products. A dispenser can be a machine where the card holder can buy products (e.g. photocopier, vending machine), a machine where a card holder can gain access (e.g. sliding door), or a reload terminal. Every dispenser is connected to a terminal.

18) FacilityPro: a 'closed' electronic transaction system developed by Magna Carta. FacilityPro Manager can be used to manage sites where transactions are effected with FacilityPro cards, MiniTix wallets and/or Chipknip.

19) Field: part of a record that contains data. A record in the card table, for instance, has fields containing the card number, balance on the card, card status, card holder, etc.

20) Frame: memory-space on a card that can be used to store any information that the administrator would like to have stored on the card. This could for example be the user group of the card holder, the card holder's blood type, the number of the site to which the card belongs, other text, a membership number through which the card can be linked to other systems (e.g. library), or other medical information. To determine the data that will be written to a frame, a frame type is assigned to that frame.

21) Frame type: in a frame type you define which type of data (text, numeric, etc.) will be written to the frames to which that frame type is assigned. This could be data collected from a field in the database, or data typed in by an administrator. A frame type is usually assigned to a frame of all the cards of a user group, but can also be assigned to a frame of an individual card.

22) Handheld: a palmtop-computer (also called PDA: Personal Digital Assistant) that is used to exchange data between FacilityPro Manager and a terminal that is not connected with FacilityPro Manager via a network. A MEQ is also a handheld and is used with Multi Card Smart Systems.

23) Hotlist: a list of card numbers that is sent to the terminals as a part of the configuration. When a card that is on the hotlist is inserted into the card reader, the terminal will block that card and it will become unusable. The cards on the hotlist are mostly lost or stolen cards.

24) Issue: to give a personalised card to a card holder.

25) Issue number: when a card is reissued a card record is created with the same card number and a value of 1 higher in the field 'Issue number'.

26) Location: the physical location on the site of a terminal and the dispenser it is connected to.

27) Machine supplier: the company that has supplied the dispenser.

28) Machine type: the type of the dispenser. There can be several terminals with dispensers of the same type in use at a site.

29) MiniTix: MiniTix is a (mobile) payment scheme introduced by Rabobank which enables you to pay from an on-line MiniTix wallet. Terminals that can accept MiniTix payments are only available for the Dutch market.

30) PC card reader: a piece of hardware that can be connected to a workstation and that can read and write cards.

31) Personalise: to write the data from a record in the card table onto a physical card. A personalised card therefore exists not only in the database, but also physically. A personalised card belongs to a specific user group, to a specific cost centre, and possibly also to a specific card holder. Once a card is personalised it can be issued to a card holder. You can personalise a card with a PC card reader. Cards can also be personalised by the manufacturer of the cards.

32) PIM: Post Issuance Management. The PIM module of FacilityPro Manager allows you to make changes to the FacilityPro cards on site without actually having the card in hand, e.g. adding value to the card balance, changing the user group or cost centre a card belongs to, adding value to the counter of a token on the card or unblocking a card that has previously been hotlisted and then blocked.

33) Poll/poll round: The collector carries out a poll round at predefined times, several times a day (e.g. every hour), whereby it seeks connection with all the terminals which have a network connection (for other terminals the polling is done manually with a handheld). At each poll round the collector collects the transaction data from the terminals. Once a day it also collects the turnover data (interim and cumulative). If any changes have been made to the configuration of a terminal, this new configuration is sent to the terminal during the next poll round.

34) Preset-period: a length of time after which a right is re-assigned. For example: In '5 free coffee per day', the preset-period is one day.

35) Product: a service or product that a card holder can get (either paid for or for free) at a terminal/dispenser. Examples of products are: a photocopy, a cup of coffee, access to the library, etc. Some products may only be given to the card holder if he has been assigned a right to the product group to which that product belongs. That right will be represented by a token on his card.

36) Product group: a collection of products that belong together. Rights are related to product groups (not to individual products). When defining the product groups one must therefore take into consideration which rights one intends to assign to the different user groups.

37) Reload terminal: a dispenser where a card holder can buy a card, dispose of a card or revalue a card.

38) Record: a part of a table. Each record represents an entity, and is sub-divided into a certain number of fields that contain the actual data about that entity. In the card holder table there is a record for each card holder, in the transaction table there is a record for each transaction, in the terminal table there is a record for each terminal, etc.

39) Reissue: to create a new record for the selected card with the same card number and an issue number one higher than the present issue number. This can be done if a card has been lost or stolen or has become unusable and one wants to keep the same card number for s specific card holder. The card with the present issue number is hotlisted.

40) Report: a report about the data of the site or the transactions effected on the site. FacilityPro Manager can generate reports at any time, using the most recent data from the database.

41) Report dashboard: a user interface to make generating reports simple for administrators that are not familiar with FacilityPro Manager and generally only have to generate a limited number of predefined reports.

42) Return: to delete a physical card from the system. This is done by changing the data on the card to make it unusable. Returned cards can be recycled (i.e. personalised again) or destroyed. A returned card still exists in the database (with card status 'no card'), until it is deleted from the card table.

43) Revalue: to increase the balance on a card.

44) Right: a right is used to define the right to obtain the products of certain product groups with a discount, on subsidy, with a surcharge, a reduction on the price or for a different price altogether, the right to use certain terminals, or the right to reload cards at an autoload terminal. A right can include a timetable that determines at which times the right is valid and a timetable that defines a preset-period. A right is assigned to one or more user groups.

45) Site: the organisation where the electronic transaction system is used.

46) Table: a collection of data. A table consists of a number of records. All the tables together form the database. There are tables for card holders, transactions, rights, terminals, cards, etc.

47) Terminal: A terminal consists of a Magnabox and a card reader, and is connected to a dispenser on the site. A card holder can insert his card into the card reader (or holds his contactless card in front of the card reader) to obtain products. When a card holder presents a card, the card reader reads the information on the card and passes this information on to the Magnabox. The Magnabox then instructs the dispenser to render (or not) its products to the card holder in accordance with the data on the card. All relevant information about transactions is saved in the Magnabox. Because the memory space in the Magnabox is limited (it can store 4000 transactions[2]), the terminal is polled at regular intervals, whereby the transaction data is collected from the terminal by the collector or a handheld, and stored in the database. At the same time, the terminal also receives data from FacilityPro Manager (through the collector or the handheld), such as changes in the prices of the products rendered by the dispenser, changes in the rights that have been assigned to user groups, and an update of the hotlist. This data is called the configuration of the terminal. If a terminal is to be polled by the collector, it will have to be connected to the collector workstation through the network.

48) Terminal data: the information that is collected from the terminals, either by a collector via a network, or using a handheld. The terminal data contains transaction data as well as data from the counters in the Magnabox. These counters include

---

[2] For terminals with a MBX2 Magnabox with firmware version lower than 3.90 the memory capacity is 1000 transactions and for Magnaboxes in older terminals with a MBX1 Magnabox the memory capacity is 500 transactions.

turnover per product, per user group, number of transactions, etc. The interim counters keep track of data since the previous collection of data from the counters. They are set to '0' each time they are collected. The cumulative counters keep track of the data since the first use of the Magnabox, or since the cumulative counters were set to '0' (e.g. when there is a software upgrade). The terminal data is collected from the terminals at regular intervals, for instance the transaction data might be collected every hour, and the data from the counters daily, once a week or once a month.

49) Terminal group: a collection of terminals of the same type. FacilityPro Manager can generate standard reports with data of the usage of each terminal group. The terminals could for instance be grouped by functionality: photocopier terminals, access terminals, reload terminals, etc.

50) Timetable: can be used to indicate for which length of time something (e.g. a right) is valid, or after which amount of time something must be done (e.g. re-assign a right).

51) Token: each card has a number of tokens. When a card is personalised the tokens are written on the card. These tokens can be linked to rights. The database contains the information about which rights are linked to which token for each user group. A terminal reads the tokens on the card and knows which rights they represent (this is a part of its configuration). When a new user group is defined, FacilityPro Manager automatically creates empty tokens in the database (as many as will fit on the card) for this user group. When a new right is assigned to a user group, it is linked to a specific token of that user group. The changed configuration is sent to the terminals. The token on the cards of that user group that at first carried no meaning (empty), now indicates that the right is valid for that card. Tokens include a counter which keeps track of the number of times a right has been used (or the amount of subsidy left unspent). The number of tokens on the cards of a site is stored in a field of the site record and depends on the type of the cards.

52) Transaction: the event of a card holder presenting his card at the card reader at a terminal/dispenser. If a transaction is successful, a product will be rendered to the card holder. But a transaction can also end with the refusal of the terminal to let the dispenser render the product, or with the card being blocked by the terminal because it is on the hotlist. A successful transaction can be described in the following steps: first a card holder presents his card at the card reader and (usually, but not for instance in the case of access) indicates which product he would like; then the terminal checks whether the card holder has the right to the product, and under which conditions; in the case of a product for which the card holder must pay, the amount due is subtracted from the card balance; if the product is granted against a right, the counter of the token for that right is lessened by one or by the amount charged (subsidy right); the dispenser renders the product.

53) Unblock: to make a blocked card useable again. To do this, a PC card reader must re-write the card.

54) Unit type: a technical classification of machine types that determines the interface between the terminal and the dispenser of that machine type. Machine types can only belong to a unit type with which FacilityPro Manager is familiar.

55) User group: a group of card holders with the same rights.

56) Workstation: a computer on which the administrators use FacilityPro Manager to manage the site. The collector module is installed on one (or more) of the workstations.

57) Zone: A zone is a group of one or more access terminals at which you want to grant access to certain cards. An access terminal is a terminal which is connected to a dispenser that controls access, such as a sliding door. If, for instance, there are three different points of entry to a parking garage, one might group them to form one zone named 'Access to garage'. The access terminals receive as a part of their configuration a list of all the card numbers that can be granted access at that access terminal, which we call the access list for that access terminal. By assigning a zone to a card, we grant the card holder of that card the right to gain access at the access terminals of that zone, as the card number is added to the access list of each of those access terminals. By assigning a zone to a user group, we grant the card holders of all the cards that are subsequently created for that user group the right to gain access at the access terminals of that zone. When a card is created for that user group, the card number is added to the access list of each of those access terminals.

2 Getting started

Before getting started with FacilityPro Manager, it must be installed on at least one workstation. You might have connected a PC card reader to one or several workstations. The terminals on your site have been installed and connected to the system. The FacilityPro Manager installation manual and the installation manuals of the terminals provide instructions for all the above. This chapter describes the basics of how to work with FacilityPro Manager.

2.1 Starting FacilityPro Manager

You can only start FacilityPro Manager if you are authorised to do so, i.e. if you are registered in FacilityPro Manager database as an administrator with a login name and a password. When FacilityPro Manager is installed, a standard administrator exists, with login name = 'customer' and password = 'customer'. This login name and password will permit you to start up FacilityPro Manager when it is first used. We recommend that you immediately define one or more new administrators (§8.2.1) and delete this dummy administrator (see Delete in §2.1.2.3) or edit the login name and the password (see Edit in §2.1.2.3) to prevent misuse of the program. The dummy administrator provided with the program belongs to the pre-defined administrator group 'system manager'. If your dealer has installed FacilityPro Manager for you, he will most probably have defined the administrators and the administrator groups for you, and you will be able to login directly with the login name and password assigned to you.

How to start FacilityPro Manager:

1. Click the Windows Start-button.
2. Choose **Programs**.
3. Choose **FacilityPro Manager**.
4. Choose **FacilityPro Manager**. You will see the login screen of FacilityPro Manager (Figure 2-1).
5. Type your login name.
6. Press **<Tab>**. The mouse pointer will jump to the field 'Password'.
7. Type your password. Note: the password is 'case-sensitive', you must consider lower and upper case characters as different characters.
8. Click OK. (If you have logged in using the login name and password provided with the program, you will see a warning message 'Change the password' and must Click OK again). You will see the opening screen of FacilityPro Manager (Figure 2-2).
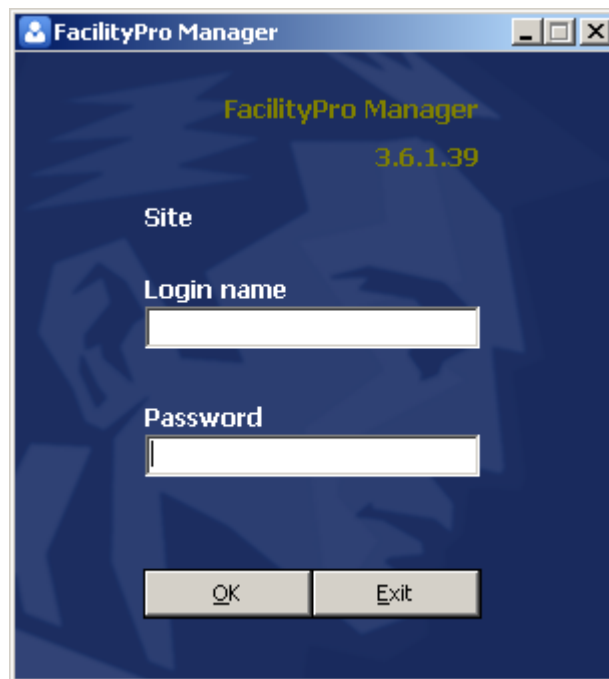
Figure 2-1 The login screen of FacilityPro Manager

Figure 2-2 The opening screen of FacilityPro Manager

2.1.1 Navigation

When FacilityPro Manager has been started, you will see the opening screen (Figure 2-2). The opening screen contains four buttons with which you can jump directly to the screens related

to the tasks you will most use. The four buttons are called Cards, Terminals, Products and Reports. If you clicke of these buttons, the appropriate screen will appear.

The four main buttons of the opening screen are one way of navigating quickly to where you need to be within FacilityPro Manager program. In FacilityPro Manager there are five different ways to navigate:

1) Using the buttons on the opening screen
2) Using the menus
3) Using shortcut keys
4) Using navigation buttons
5) Using hyperlinks

In the following paragraphs these navigation techniques will be explained. You will see that there are many different ways to perform a task in FacilityPro Manager. In the instructions in this manual we will, for clarity's sake, always present only one way in which to perform a specific task, always using the menus to navigate.

2.1.1.1 Menu bar and shortcut keys

When using FacilityPro Manager you will always see a menu bar with the nine main menus at the top of the screen. These main menus are: **File**, **Edit, View**, **Cards**, **Terminals**, **Products**, **Reports**, **Configuration** and **Help**. If you are logged in as an administrator with limited authorisation, you will see fewer menus. Whichever task you want to perform with FacilityPro Manager, you can always reach the screen from which to perform that task, by choosing the correct menu option from the menu bar. The main menus each have a number of menu options relating to the various tasks that FacilityPro Manager supports. Some of the menu options will open a specific data screen, relating to one of the tables of FacilityPro Manager's database (§2.1.2). From these data screens one will view or manipulate the data in the related table of the database. Those menu options that do not open a data screen, open a sub-menu or open other screens from which specific tasks are performed, such as importing data into the database or making changes to the data on a card with the PC card reader.

When you click on the main menus, the corresponding menu options will appear. When you then click on a menu option, the screen belonging to that menu option or a sub-menu will appear. You can also open a menu or menu option by pressing shortcut keys. If you press **<Alt>**, one character is shown underlined in each menu name. A main menu can be opened by pressing **<Alt+[character]>**. When a main menu is opened and the menu options are visible, again each menu option name has one character underlined. After opening a main menu as described above, you can choose a menu option by just pressing the underlined character of that menu option. An example: pressing **<Alt+c, u>** is a way of opening the main menu **Cards** and selecting the menu option **User groups**.

2.1.1.2 Navigation buttons

When using FacilityPro Manager you will always see three navigation buttons at the bottom left corner of the screen. Click Start to return to the opening screen of FacilityPro Manager.

Click Previous, to return to the screen you were working with before you opened the current screen.
Click Next, to return to the screen you were working with when you clicked Previous.

2.1.1.3 Hyperlinks

The different tables of the FacilityPro Manager database contain data that are often related to the data in one or more other tables of the database. A clear example is the relationship between a card and a card holder. When working with the cards data screen, one of the fields on the screen will be the field 'Card holder'. If you quickly want to jump from the cards data screen to the card holders data screen, you can use the hyperlink. A hyperlink can be easily recognised, as the field name on the screen is in blue characters instead of black characters. Also, the mouse pointer will change from an arrow to a hand when moving above the hyperlink. In the example mentioned above, clicking on the hyperlink, i.e. on the field name 'Card holder' of a specific card, will cause the card holders data screen to appear with the card holder of that card selected.

2.1.2 Layout of data screens

Many of the tasks that you will perform with FacilityPro Manager will be executed from what we call a data screen. A data screen represents a table of FacilityPro Manager database. There are many different data screens in FacilityPro Manager, but the layout of these screens is always the same. There are data screens for Cards, Card holders, User groups, Costs accounts, Terminals, Terminal groups, Machine types, Locations, Machine suppliers, Products, Product groups, Rights, Zones, Reports, Site options, Administrators, Administrator groups, Workstations, Timetables and Frame types. Each of the data screens can be opened from one of the menu options of FacilityPro Manager (§2.1.1.1).

Every data screen is divided into two main areas: the record list and the data entry area.

The record list
On the left of the screen you will see a 'record list'. In this list you will see all the records of the related table, for instance, all the card holders, all the terminals or all the machine suppliers.

The data entry area
On the right of the screen you will see the data pertaining to the record that is selected in the record list. This part of the screen is called the 'data entry area'.

When you open a data screen for the first time after starting up FacilityPro Manager, by default the first record of the record list is selected. In the data entry area you will see the data of that first record. When you re-open a data screen, after having worked in other data screens, the record last selected when working in this data screen will still be selected.
When you open a data screen by clicking a hyperlink in a related data screen (§2.1.1.3), the selected record will be the record that is related to the record you were working on in the other data screen.

In addition to the two main areas of the data screen, the record list and the data entry area, there are the so-called function buttons and action buttons, which are used to manipulate (delete, edit, create, etc.) the data in the table.

Finally, in the bottom right corner of the screen, you will always see the name of the data screen in large characters.

The next four paragraphs explore the different areas of the data screens: the record list, the data entry area, the function buttons and the action buttons.

2.1.2.1   Record list

When you open a data screen you will see the record list on the left side of the screen. In this record list you can see all the records of the table to which that data screen relates (Figure 2-3).
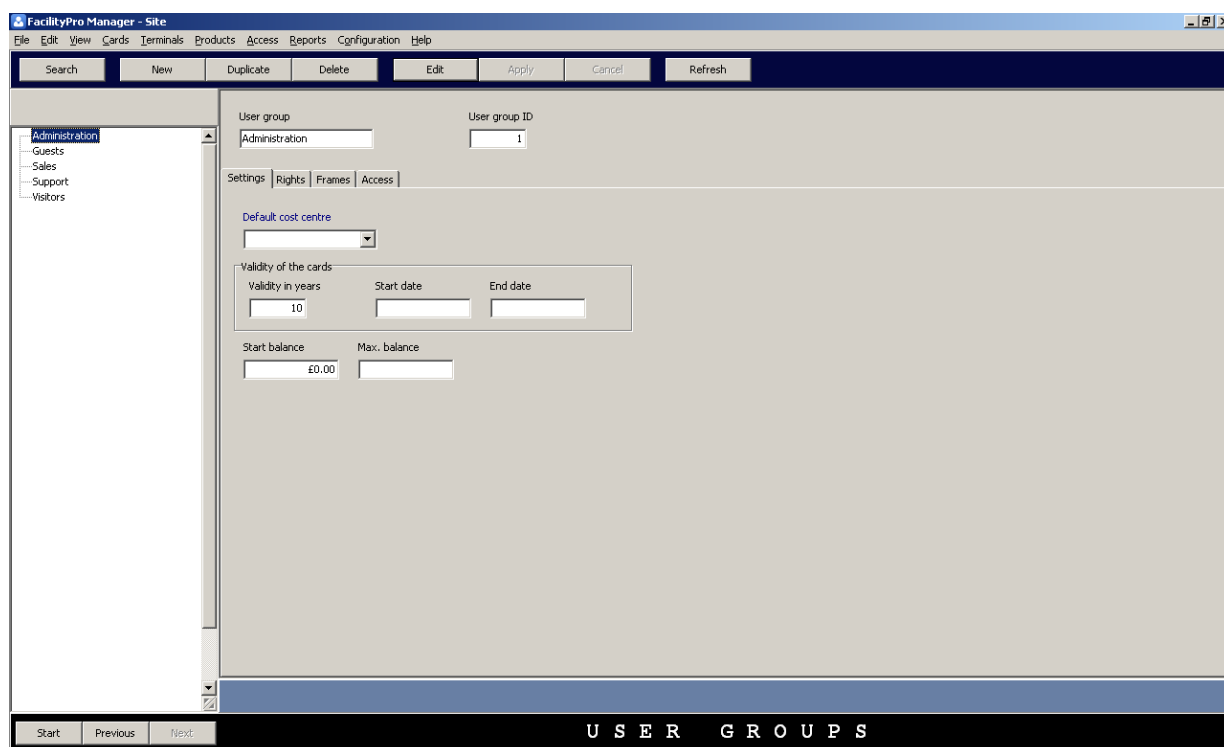
Figure 2-3 The user groups data screen
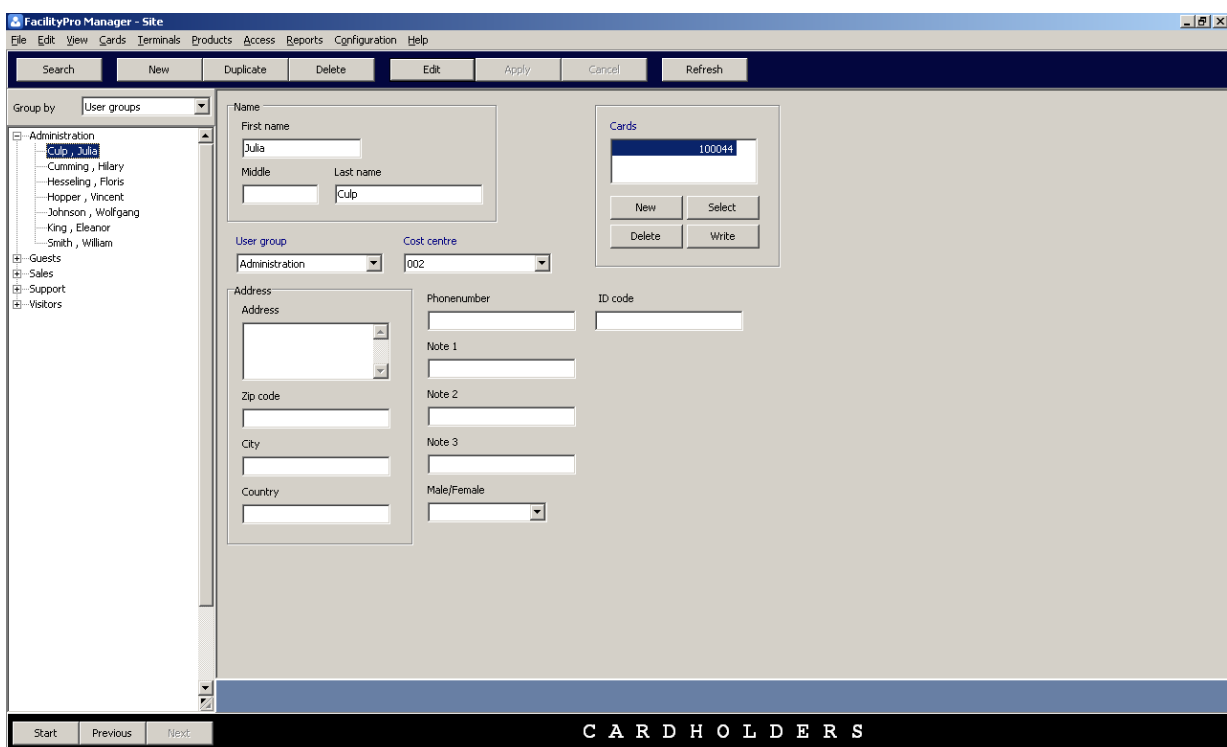
Of every record in the record list you will only see the most identifying field. On the user groups data screen, for example, you will see all the user groups in the record list, of each user group you will only see the name.

In some cases these record lists can be very long. For ease of survey it can help if the records in the record list are grouped. For example, you might want the card holders to be grouped by user group. This can be done as explained below. By default many record lists are grouped. Not all record lists can be grouped.

At the top of the record list you will see the words 'Group by' and next to it the field by which the record list is currently grouped. If you click the arrow next to this field you will see the fields by which the records can be grouped. The first field is the identifying field of the records in the record list. If you choose this field you effectively un-group the record list.

How to group a record list:

1. Click the arrow next to the field to the right of the word 'Group by'.
2. Select the field that you want the record list to be grouped by. The list will now be shown grouped. If, for instance, you have grouped the card holders in the card holders data screen by user group, you will now see in the record list, a list of user groups instead of a list of card holders. You will see the card holders of one user group at a time. Click ⊞ next to a user group in the record list to see the card holders of that user group (Figure 2-4).

Figure 2-4 The card holders data screen with grouped record list

2.1.2.2 Data entry area

When you open a data screen you will see the data entry area on the right of the screen. This area shows the fields of the record selected in the record list. Usually you will have opened a data screen either to find data or to make changes in the data. If, for instance, you are looking for the address of a card holder, you will select that card holder in the record list and in the data entry area you will see the data of that card holder, including the address.

The data entry area is sometimes composed of multiple tabs. Each record might contain too many fields to present all the data on one screen. The data of a record has been sub-divided

and is presented on separate tabs. You can only see and work with one part of the data at a time. When you open a data screen which has several tabs, the first tab will normally be active. This tab is almost always called 'Settings' and contains the basic data of the record. Just click a tab to change the active tab.

2.1.2.3 Function buttons

At the top of each data screen you will see eight function buttons. You will use these buttons to consult or edit the data of the table to which the data screen relates. This paragraph discusses how to use each of the function buttons. If you are logged in as an administrator with limited authorisation, some or all of the function buttons will be grey and you cannot use them.

Search

You will use this function button to find a specific record in the table. You will specify the value that one of the fields of the record you are searching for must have. If, for example, you want to find Pete Monder in the card holder table, you will specify that you want to look for the record in which the field 'Last name' has the value 'Monder'. This example will be used in the instructions.

How to find a record in a table:

> Note: the function button Search will only find the first record in the table that satisfies the search condition. You cannot search for subsequent records that also satisfy the search condition. That is why you must sort the records before searching (step 3). All the records that satisfy the search condition will be close together and will be easy to identify after the search.

1. Click Search. You will see the search dialog screen (Figure 2-5).
2. Click the name of the field that you will use for search condition (example: click '**Last name**'). This determines that this field will be the field used for the search condition.
3. Click again on the name of the field that you have chosen for the search condition (example: click '**Last name**'). This will sort the records alphabetically or alphanumerically, according to the value of the specified field. An asterix appears next to the name of the field. If more than one record is found that meets the search condition (step 7), these records will be grouped together and you will quickly be able to find the record you are actually looking for.
4. Click in the empty data entry field next to the search button in the bottom left corner of the search dialog screen.
5. Type the value of the field you are using as search condition (example: type '**Davis**').
6. If the field you are using as search condition has a text value, the search will normally search for a record which has the specified text at the beginning of the specified field. If you want the search action to accept records where the specified field contains the specified text anywhere within the field (so not necessarily at the beginning), click in the check-box 'Start with' to remove the tick.
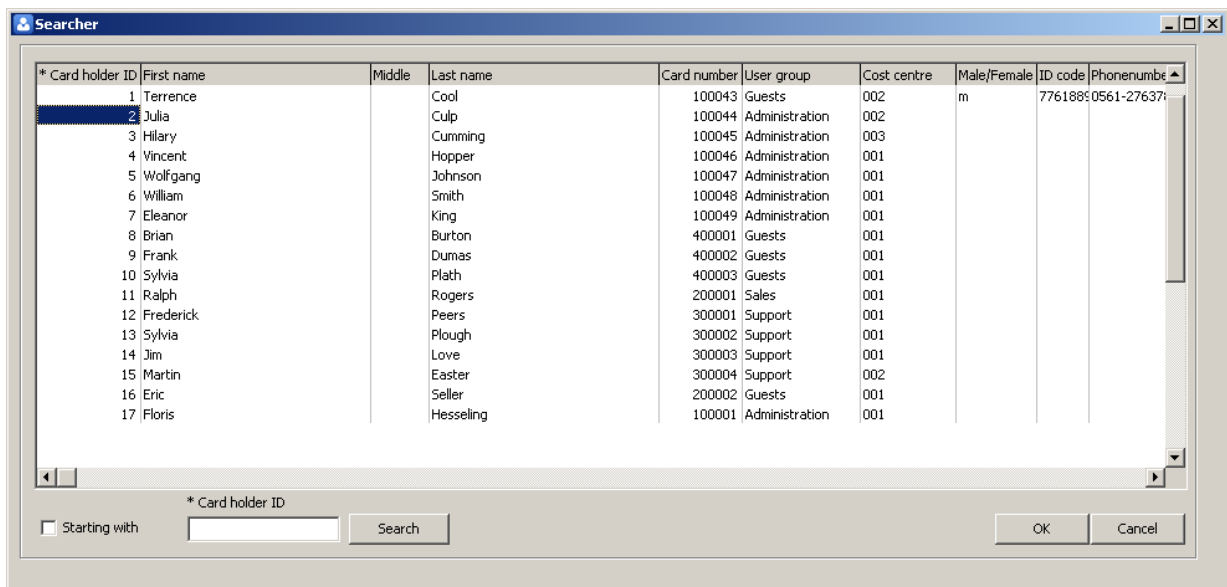
Figure 2-5 The card holders search dialog screen

7. Click Search in the bottom left corner of the search dialog screen. In the search dialog screen the first record that satisfies the search condition will be selected. Any other records that also satisfy the search condition can be seen directly below the selected record. If there is no record in the table that satisfies the search condition, you will see the message 'No record found'. If, at step 5, you entered a value that is not valid for the specified field, You will see an error message.
8. If more than one record satisfies the search condition, and the selected record is not the record you are searching, scroll down to find the record you were searching and click in any of its fields, thereby selecting that record.
9. Click OK. This ends the search and brings you back to the data screen. In the record list the record that was found through the search (if any) is now selected.

New

With this button you can create a new record in the table.
The instructions for creating a new record are different for each table. In the following chapters you will find separate paragraphs for each table with instructions for creating a new record, for example §3.1.1, §3.2.1, etcetera.

Duplicate

With this button you can make a copy of the selected record. It creates a new record, identical to the selected record. You will use this function when you want to create a new record almost identical to an existing record. This will save you re-entering data, as you will only have to edit the data that differ from the original record.

An example: you have bought a new vending machine for soft drinks. This dispenser is of the same machine type as another dispenser already in use, and it will provide the same products. You can use the function button Duplicate to make a copy of the terminal at the existing dispenser. You need to change only a few fields in this copy for the record to reflect the data of the terminal at the new dispenser.

Depending on the table you are working with, the duplicate function will or will not automatically make the new record distinguishable from the original. Unless the two are distinguishable, you will not be able to save the copy created by the duplicate function, until you have made changes to at least one field in that record. Every new record must have at least one unique field for identification. That field is not always visible to you. When you duplicate a card, the new card will automatically be assigned a new card number, which you will see in the data screen, the rest of the fields are the same as in the original record. When you duplicate a card holder, an identifying field in the table distinguishes the copy from the original (this is the field 'Card holder ID'), but this field is not visible on the data screen. To you the two records look exactly the same, but the new record can in fact be saved, and will then represent a new card holder with the same names, address, etc. as the original! When you duplicate a terminal you will have to change the name of the terminal yourself before saving the new record, because this field is the identifying field for a terminal.

How to make a copy of a record with the function button Duplicate:

1. Select the record you want to copy.
2. Click Duplicate. A new record will be created with the same data as the original record.
3. Edit the fields that must be different from the original record. Note: in most cases you will have to at least change the value in the name field, which is the identifying field. When duplicating cards, card holders, reports or frame types, this is not necessary.
4. Click Apply.
5. Click OK. The new record will be saved. The record list will include this new record.

Delete

When you delete a record, you might receive a message warning you that the record cannot be deleted because it is still in use (e.g. when deleting a group that still contains cards: 'This group still has cards in it!', or asking whether you want to delete other records related to this record at the same time ('Usergroup still has cards. DELETE those?').

How to delete a record:

1. Select the record you want to delete.
2. Click Delete. You will see the message 'Delete this record?'.
3. Click Yes. The record will be deleted. The record list will no longer include this record.

Edit

How to edit a record:

1. Select the record you want to edit.
2. Click Edit.
3. If the field you want to edit is on a tab that is not active, click the appropriate tab.
4. Click in the field that you want to edit.

5. If a list of possible values for this field appears, click the value you want for this field. Otherwise double-click in the field and type the new value for that field.
6. Repeat steps 3 through 5 for all the fields that you want to edit.
7. Click Apply.
8. Click OK. The edited record will be saved.

> Note: To quickly make changes you can directly edit data in a field as in steps 4 through 5 above. The function 'edit' will be activated as soon as you enter data in a field. The data will be saved in the database by pressing the buttons *Apply* and *OK*.

> *Note: not all fields can be edited by the administrator. These fields are called 'read-only' fields. Data in these fields is presented in grey instead of black text.*

Apply

You will use the function button Apply when you have created a new record with the function buttons New or Duplicate and when you have changed a record with the function button Edit. You will click Apply to indicate that you want to save the new record or the changes you have made to the record. In all cases you will see the message 'Save changes?'. You can choose between clicking on OK or Cancel. If you choose OK the new record or the changes to the record will be saved. If you choose Cancel you will return to the editing mode. You can only permanently cancel the activity of creating the new record or editing the record by then choosing the function button Cancel.

Cancel

You will use this function button when you have created a new record with the function buttons New or Duplicate or when you have edited a record with the function button Edit. You will click Cancel to indicate that you do not, after all, want to create the new record, or edit the selected record. The new record or the changes to the data in the selected record will not be saved.

Refresh

You will use this function button when you believe the data on the screen are not up to date with recent changes to the databases.

2.1.2.4 Editing fields

How to edit a field:

1. Click Edit. (You can also skip this step).
2. Click in the field that you want to edit.
3. If a list of possible values for this field appears, click the value you want for this field. Otherwise double-click in the field and type the new value for that field.
4. To delete the data in a field, select the data and press **<Ctrl+Del>**.

2.1.2.5 Action buttons

Depending on which data screen you are working in and which level of authorisation you have, you may or may not see a number of action buttons on the screen. Action buttons activate functions that are specific to the table you are working with (unlike the function buttons, which can be used for all tables, as discussed in §2.1.2.3. Therefore the instructions for using the action buttons are not given here, but in the chapters on the tables to which they belong.

Some examples of action buttons are the action button New batch on the cards data screen, for creating more than one card in the database at the same time, and the action button Send config on the terminals data screen for sending a changed configuration to a terminal.

2.1.3 Closing down FacilityPro Manager

When you want to stop working with FacilityPro Manager, you will generally close down the program. To increase security, FacilityPro Manager will partially close down automatically and the login screen will appear if you have not worked with FacilityPro Manager for 15 minutes. In order to continue working with FacilityPro Manager it will be necessary to login again. You can turn off this built-in automatic log off by editing the line 'Shutdown=15' in the file <FacilityPro.ini> in the folder c:\FacilityPro\bin.

How to close FacilityPro Manager:

1. Choose menu **File**.
2. Choose **Exit**. You will see the login screen (Figure 2-1).
3. Click Exit.

3   Cards

FacilityPro Manager is a software package for managing electronic transaction systems. The smartcard, or card, is one of the most basic elements within an electronic transaction system and within FacilityPro Manager. A card has a microchip on it that can contain data. But not all the relevant data of a card is saved on the microchip. Most of this data is saved elsewhere by FacilityPro Manager, namely in the database. For example, the card number of a card is saved in the microchip (as well as in the database). But the name of the card holder is saved only in the database. When a lost card is found, the card number of this card can be read from the card. To find out to whom the card belongs, you must consult the database.

Card status

Before we continue our discussion of cards, we must explain the concept of card status. When smartcards are bought (from the manufacturer) they are either blank cards or initialised cards. Initialised means that software has been installed on the cards. Initialised cards can either be personalised or not. Personalised means that certain data has been written on the cards. We must distinguish between a card that is still in the possession of an administrator and a card that has been given to a card holder (the latter we call an issued card). A card that has been stolen or lost is placed on the hotlist and this list is passed through to all the terminals. A terminal will recognise a card on the hotlist when it is used and block it immediately. The card is then deleted from the hotlist and has become unusable. The person who found the card can also decide to return the card to the administrator. The administrator can unblock the card so that it becomes usable again and give it back to its rightful owner. A card holder can return a card to the administrator and a card can be defective.

The card status determines the status of a card in the database. The 'Status date' field of a card shows the date the card status was last changed.

CARD STATUS	DESCRIPTION
NO CARD:	A physical card corresponding to the card record in the database has not yet been created.
PERSONALISED:	A physical card corresponding to the card record in the database exists. The data of the record has been written onto this card with a PC card reader or by the manufacturer of the card.
ISSUED:	The physical card corresponding to the card record in the database has been given to the card holder.
HOTLISTED:	The card is on the hotlist. Any terminal will block the card when it is inserted, making it unusable.
BLOCKED:	The card is unusable. A terminal will always reject a blocked card.

Table 3-1 Card status

In order to help you understand all this card terminology, the various possible card statuses are described in the table above (Table 3-1).

The main menu 'Cards' of FacilityPro Manager has menu options which open the data screens representing the four tables in the database that contain information related to cards: cards, card holders, user groups and cost centres. The main menu 'Cards' also has the menu option 'Card service'. This opens a screen from which one can manipulate only certain data on a card.

3.1 Cards

On the cards data screen, the record list is a list of all the cards. From this screen you can view, create, edit, and delete cards.

The tabs of the cards data screen
The cards data screen has the tabs: 'Settings', 'Frames', 'Rights', 'Access', 'Salary Sacrifice/Autoload' and 'Card update'.
The tab 'Frames' is not visible by default, because most sites do not use frames. To make this tab visible the authorisation level for frame types must be changed (§8.3) and at least one frame type must be created (§8.6.1).
The tab 'Rights' is a 'read-only' tab, on which you can see which rights are on the card which is in the PC card reader after reading the card with the action button Read (§3.1.3.3). This tab is discussed in §3.1.2.2.
The tab 'Access' is only visible if zones have been defined in the database.
The tab 'Salary Sacrifice/Autoload' will only be visible if the Autoload module has been installed.
The tab 'Card update' will only be visible if the PIM module has been installed. To make this tab visible the field 'Card update (PIM)' of the site record should be checked (§8.1.1) and the authorisation level for 'Cards.card update (PIM)' should have the value 'Available' (§8.3.1).

One of the tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a card can be viewed or edited.
Above the tabs, at the top of the data entry area of the cards data screen there is one field: 'Card number'. This field is therefore visible whichever is the active tab.
The tab 'Settings' contains the basic data of a card, and is discussed in §3.1.1.
You will use the tab 'Frames' to save data in the frames of the cards, which differs per card and must therefore be entered at card level, and not at user group level. Instructions on how to do this can be found in §3.1.2.1.
You will use the tab 'Access' when you want a specific card to be granted access (or no longer to be granted access) at the access terminals of a certain zone (§6.1). You will assign this zone to the card (or remove the zone from the zones previously assigned to this card). Instructions on how to do this can be found in §3.1.2.3. The card number of the card will then be added to (or taken off) the access list of each of the access terminals of the zone. FacilityPro Manager manages access control through these access lists, i.e. by checking card numbers at the access terminals. A zone can also be assigned to a user group, in which case all subsequently created cards of this user group are automatically assigned that zone (§3.4.2.3).

You will use the tab 'Salary Sacrifice/Autoload' to see which Autoload commands have been processed for the selected card, whether the commands have been executed or are still pending, which amount is stored in the Autoload e-purse account for this card (pending to be written to the card when inserted at an Autoload terminal) and to change the password for webloading for this card. This tab is discussed in §3.1.2.4.

You will use the tab 'Card update' to see which PIM commands have been processed for the selected card, and whether the commands have been executed or are still pending. This tab is discussed in §3.1.2.5.

3.1.1 Creating a card in the database

The fields of the data entry area of the cards data screen (when the tab 'Settings' is active) are listed and explained below. The fields marked * must be assigned a value:

1) Card number*: number of the card.
2) Card holder: card holder to which the card belongs. There is an action button New for this field which enables you to create a new card holder for a card, or to search for an existing card holder by entering a known 'ID code' (§3.2.1).
3) User group*: user group to which the card belongs.
4) Cost centre*: cost centre to which the card belongs.
5) Status (Card status): can have the values 'no card', 'personalised', 'issued', 'hotlisted' or 'blocked' (see introduction chapter 3, Table 3-1). This is a read-only field.
6) Last modified date (Card status): The date of the last change of the card status. This is a read-only field.
7) Issue number (Card status): it is possible to issue the same card number several times. When a card is reissued, for instance because the card has been lost or has been damaged and is unusable, the issue number is augmented by 1 and the previous issue number is added to the hotlist so that it becomes unusable.
8) Start date (Validity period): date on which the period of validity of the card starts. The default value for this field is the value of the field 'Start date' of the user group to which the card holder of this card belongs (§3.4.1). You will only see the value of this field if it has been specified separately for this specific card.
9) End date (Validity period): date on which the period of validity of the card ends. The default value for this field is the value of the field 'End date' of the user group to which this card belongs (§3.4.1). You will only see the value of this field if it has been specified separately for this specific card.
10) Last seen balance: This is a read-only field. This field shows the balance on the card, according to the data in the database. This field is updated after each poll round, if the transaction data show that transactions have been effected with this card changing the balance of the card. If there has been any transaction with this card since the last poll round this field might not show the actual balance of the card at that time. This can only be read from the card itself, with the action button Read of the cards data screen (§3.1.3.3) or with the action button Read of the card service screen (§3.3).
11) External card number: a number that can be assigned to the card. This number may be printed on the outside of the card.
12) Note: notes on the card.

To create a card, fill in the fields you wish to assign a value. Instructions on how to do this are given below. You might also want to write specific information in the frames of the new card (§3.1.2.1) and/or assign one or more zones to the new card (§3.1.2.3).

Cards can also be created using the action button New batch (§3.1.3.1). When cards are created using the action button New batch FacilityPro Manager offers the possibility of assigning card numbers in such a way as to keep the cards of each user group together. It will multiply the value of the field 'User group ID' (§3.4.1) with 100,000 and then assign card numbers to cards of that user group within that range (e.g. card holders of user group STUDENT will have cards 100001..199999, card holders of user group PERS-LA will have cards 200001..299999, etc.). When you create cards using the function button New as described below, card numbers will only follow this system of disjunct numbers per user group if you first group the cards by user group, and then select the user group for which you want to create the new card. If you use the function button New when the cards are not grouped by user group, each new card will be assigned the numeric value of the highest card number which has ever been used for a card, plus one. We therefore advise that if you want the cards per user group to have disjunct numbers, you either create new cards with the action button New batch or by using the function button New after first grouping the cards by user group and selecting the appropriate user group.

How to create a card:

Note: To create a card the user group, cost centre and card holder (if any) to which the card belongs must exist in the database.

1. Choose menu **Cards**.
2. Choose **Cards**. You will see the cards data screen (Figure 3-1). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'. The cards should be grouped by user group.)
3. Select the user group that you want to create a card for in the record list.
4. Click New. A new card is created with 'Card number' = highest card number in use in this user group plus one.
5. Edit the field 'Cost centre' and any other fields of the data entry area that you wish to fill in or change (§2.1.2.4). If you want to fill in an existing card holder for this card and you know the name, you can choose the card holder from the drop-down list (if you have selected a cost centre). If you want to create a new cardholder, you can use the action button New next to the card holder field and fill in the name (format [First name (,middle,) Last name]) and (optional) the ID code of the new card holder in the dialog screen shown in Figure 3-2, and then click OK. When you save the new card you will be asked if you wish to add the new card holder to the card holder table (Figure 3-3) and should click Yes. If you want to fill in an existing card holder for this card and you know the ID code of the card holder, you can use the action button New next to the card holder field and fill in the ID code. FPM will show the name of the card holder with that ID code and you can confirm by pressing OK.
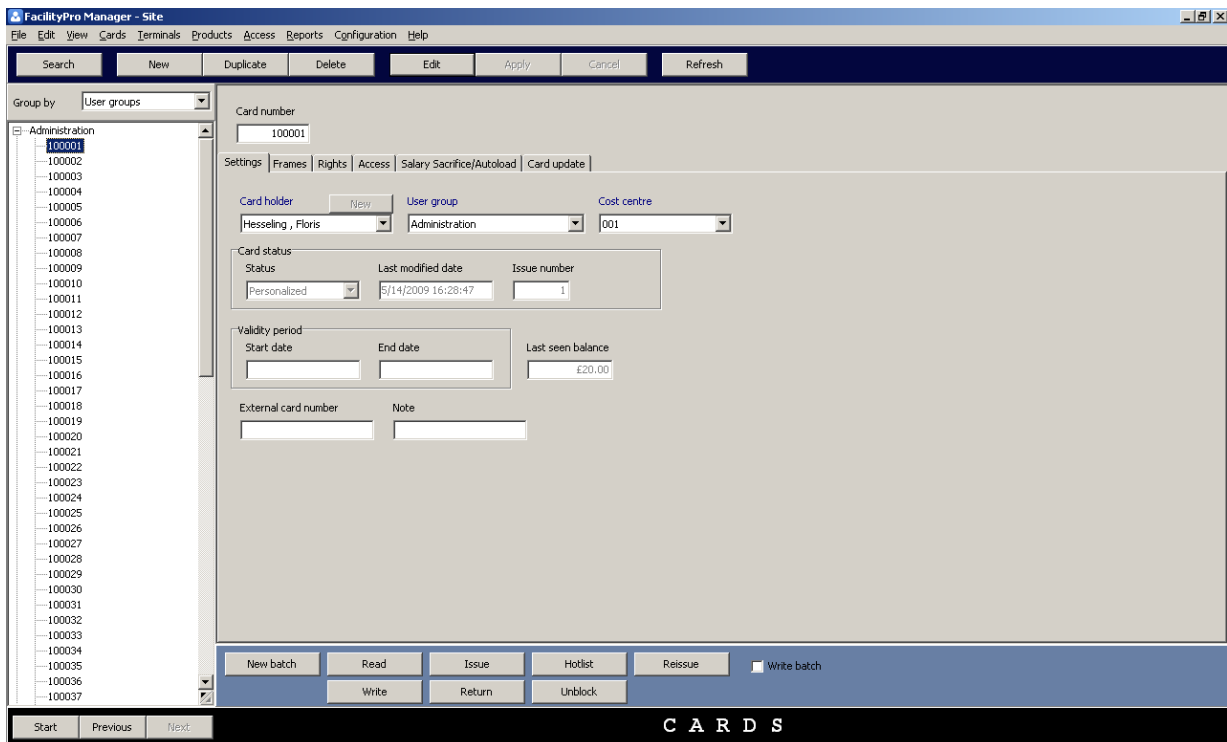
Figure 3-1 The tab 'Settings' of the cards data screen
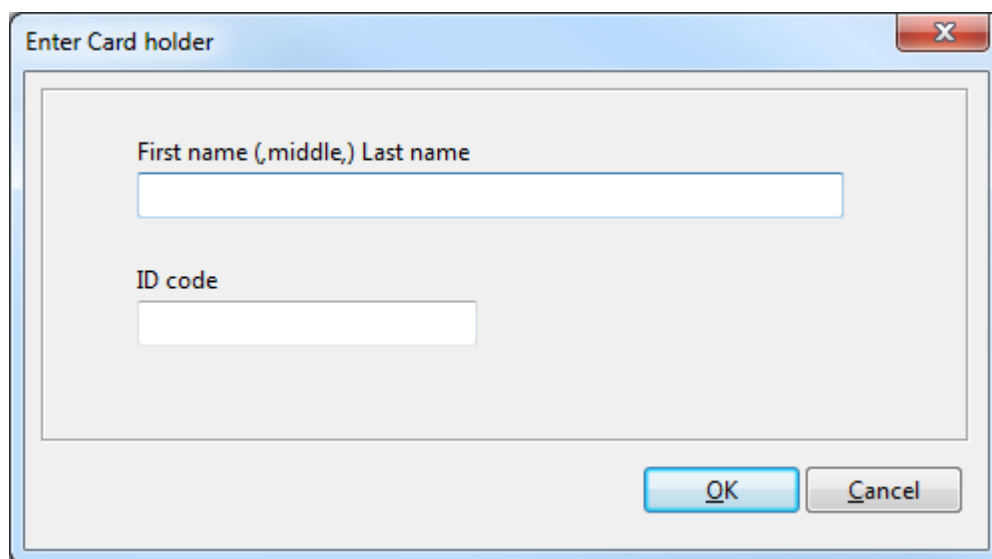
Figure 3-2
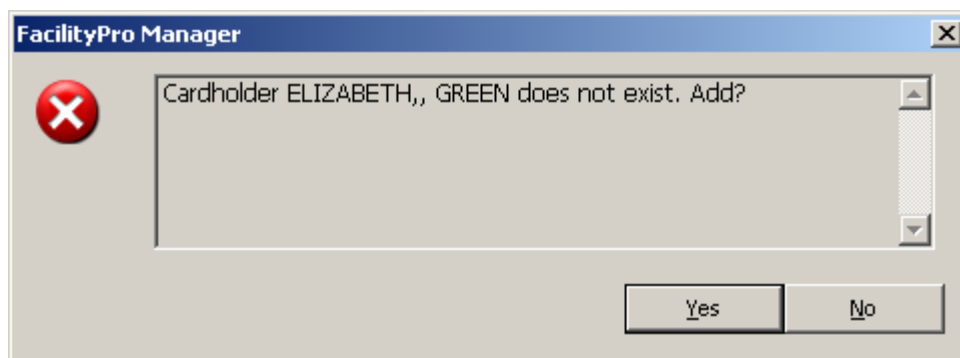
Figure 3-3

6. To save data in the frames on this card which is different from the data in the frames of other cards of the same user group, and must therefore be entered at card level, follow steps 5 through 13 of §3.1.2.1. You can also define the data to be written in the frames at a later stage by following all the instructions in that paragraph.
7. To assign one or more zones to this card, enter the necessary data on the tab 'Access' by following steps 5 through 9 of §3.1.2.3. You can also assign the zones at a later stage by following all the instructions in that paragraph.
8. Click Apply.
9. Click OK. The new card will be saved. The record list will include the number of this new card.

3.1.2   The tabs of the cards data screen

Apart from the tab 'Settings' of the cards data screen, there are four other tabs, the use of which is described in the following paragraphs.

3.1.2.1   The tab 'Frames'

As the functionality offered by FacilityPro Manager for frames is not used on most sites, the menu frame types, and the tab 'Frames' on the cards and user groups data screens is invisible by default. To use frames you must change the level of authorisation for frame types for the administrator group that you belong to.

A frame is a memory-space on a card that can be used to store any information that the administrator would like to have stored on the card. This could for example be the user group of the card holder, the card holder's blood type, the number of the site to which the card belongs, other text, a membership number through which the card can be linked to other systems (e.g. library), or other medical information.
Per user group we define how many frames there will be on the cards of that user group (§3.4.2.2). The frames are numbered accordingly. Thus if there are three frames, they are numbered 1, 2, 3. To determine the data that will be written to a frame, a frame type is assigned to that frame.
Usually a frame type is assigned to a frame of a user group (§3.4.2.2), rather than to a frame of an individual card. All the cards of that user group then have the same information in that frame. This provides enough functionality for most sites. This paragraph describes how to assign a frame type to a frame on a specific card, so that specific data can be added to that frame of that card.
Sometimes you might NOT want any information to be written on the frames of a specific card, even though frame types have been assigned to frames of the user group of that card. This could be the case if other information has already been stored in the frames of that card by another system. The tab 'Frames' of the cards data screen has a check-box 'Write the frames on the card' which is checked by default. If the check-box is un-checked, NO information will be written to the frames of that card when the card is personalised.

How to add specific information to a frame on a specific card:

Note: To store information in a frame, the appropriate frame type must exist in the database.

Note: Usually a frame type is assigned only to a frame of a user group (§3.4.2.2), rather than to an individual card. You must only follow these instructions if you want information to be written in the frames of the cards, which will differ per card within a user group.

Note: To assign a frame type to a frame (e.g. frame 2) of an individual card, that frame type must first have been assigned to the same frame (frame 2) of the user group to which that card belongs. The data which must only appear on the individual card can then be entered in the field 'Data' of that frame as described below. Only frame types which have the value 'Cards' in the field 'Table' and have no value in the field 'Field' (§8.6.1) can be assigned to a frame of an individual card.

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card on which you want to add information to one or more of the frames.
4. Click Edit.
5. Click the tab 'Frames'. You will see the tab 'Frames' (Figure 3-4). On the right you will see a list of all the frame types. On the left you will see a list (which might be empty) of frame types that have been assigned specifically to frames of this card.
6. In the list of frame types on the right, select the frame type to which you want to add information for this specific card.
7. Click the arrow <+ to add the selected frame type to the list of frame types that have been assigned specifically to frames of this card. The frame type record must have the value 'Cards' in the field 'Table' and no value in the field 'Field' (§8.6.1), and must have been assigned to a frame of the user group of this card. The selected frame type will automatically be assigned to the same frame as the frame it has been assigned to for the user group of this card (§3.4.2.2*).*
8. In the list of frame types on the left, double-click in the field 'Data' of the frame type you have just added. You will see a dialog screen with the message 'Enter data:'.
9. Type the data that you want to be saved in the corresponding frame of this card.
10. Click OK.
11. Repeat steps 6 through 10 to add more card-specific data to the frames on this card.
12. To delete a frame type from the list of frame types on the left, select the frame type you want to delete and click the arrow >- to delete it.
13. To delete all the frame types from the list of frame types on the left, click the arrow >> to delete them.
14. When the list of frame types on the left is completed to your satisfaction, click Apply.
15. Click OK. The edited card will be saved, i.e. the data entered specifically for this card will be stored in the database and later be written to the corresponding frames of this card when the card is personalised.
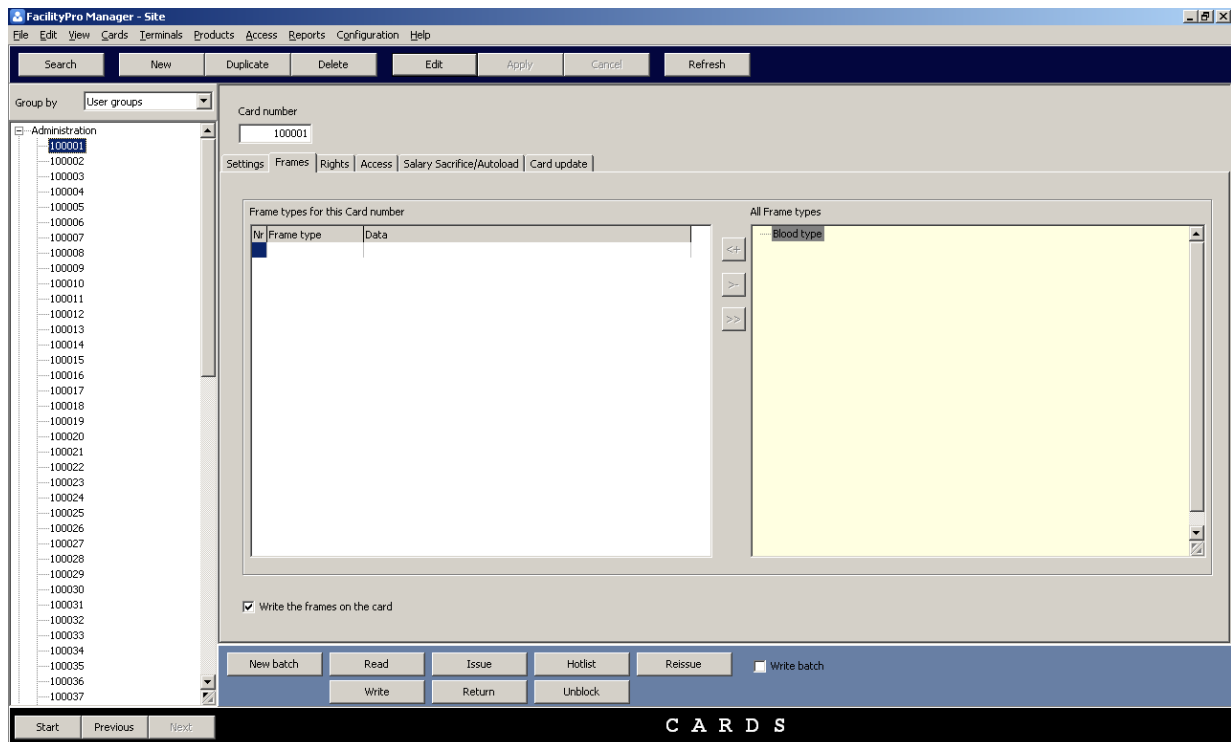
Figure 3-4 The tab 'Frames' of the cards data screen

How to define that the frame types assigned to the frames of the user group of a specific card must NOT be written on that card:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card on which you do NOT want information to be written on the frames.
4. Click Edit.
5. Click the tab 'Frames'. You will see the tab 'Frames' (Figure 3-4).
6. Click in the check-box 'Write the frames on the card' to un-check it.
7. Click Apply.
8. Click OK. The edited card will be saved. When the card is personalised, no data will be written to the frames of this card.

3.1.2.2   The tab 'Rights'

The tab 'Rights' is a read-only tab. Only when you have read a card with the action button Read (§3.1.3.3), the tab 'Rights' will show which rights are on that card (Figure 3-5).
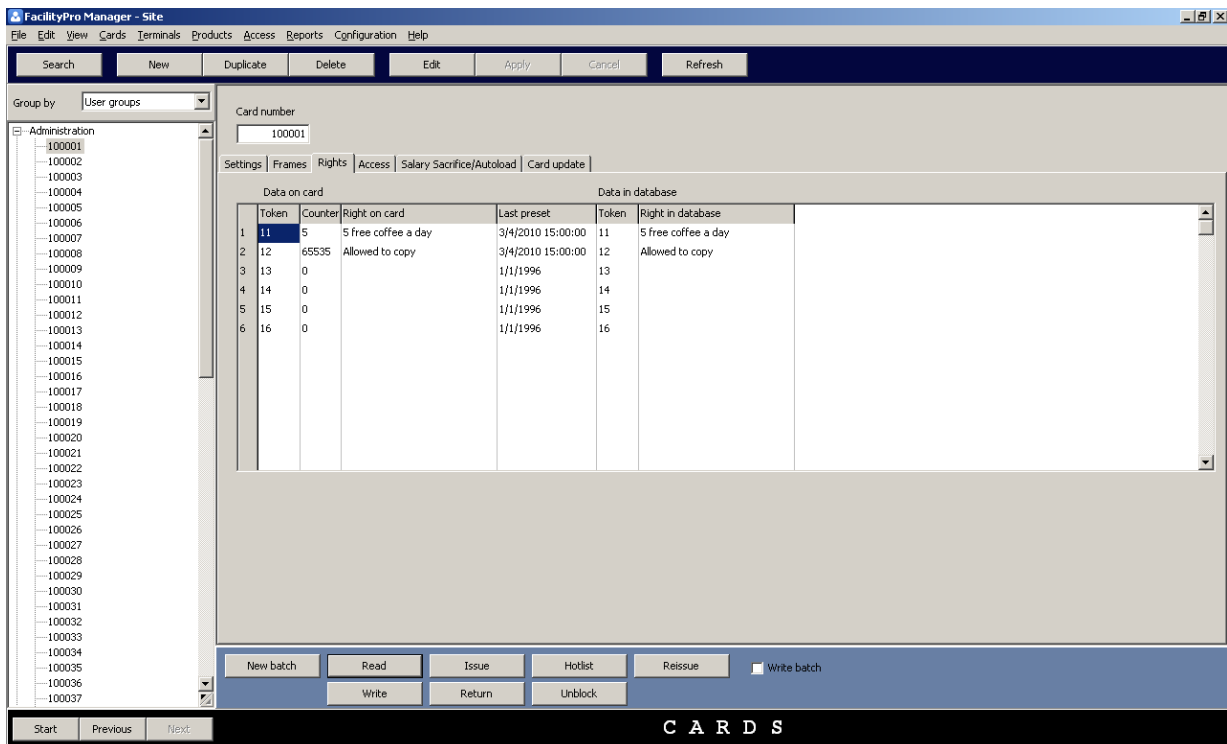
Figure 3-5 The tab 'Rights' of the cards data screen

3.1.2.3 The tab 'Access'

On the tab 'Access' of the cards data screen you can define an access group (§6.2) that you want to assign to the selected card. When you define an access group for a card, the card number of that card will be added to the access lists of all the access terminals of all the zones of that access group, together with the timetables defined in the access group (if any). These access lists are sent to the access terminals as a part of their configuration. When a card is presented at an access terminal, the terminal will check the card number of the card against its access list and the actual time against the appropriate timetable to know whether to grant access to the card holder.

When an access group is assigned to a user group, each new card that is created belonging to that user group, will automatically be assigned that access group, and therefore that access group will be visible on the tab 'Access' of the cards data screen for those cards. You can also use an action button to change the access group of all existing cards of that user group to the currently assigned access group. More on this topic can be read in §3.4.2.3.

You can assign an access group to a card following the instructions given below. One of the instances in which you will assign an access group to a card is when you want that card, but not other cards in the same user group, to be granted access at the access terminals of the zones of that access group and on the conditions set in the timetables of that access group.

Sometimes an access group might have been assigned to a card (either automatically, when it was created, because the access group was assigned to the user group of that card, or manually), but you might want to exclude that card from gaining access at the access terminals of the zones of that access group. In that case you must take away a previously assigned access group from that card following the instructions given below.

How to assign an access group to a card or remove a previously assigned access group:

Note: To assign an access group to a card, the access group must exist in the database.

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to assign an access group to or remove an access group from.
4. Click Edit.
5. Click the tab 'Access'. You will see the tab 'Access' (Figure 3-6). You will see the field 'Access group', which might be empty or contain a previously assigned access group.
6. To remove an access group double-click in the field 'Access group' to select it and then press **<Ctrl+Del>** to delete it.
7. To assign an access group click the arrow next to the field 'Access group'. You will see a list of existing access groups. Select the access group you want to assign to this card.
8. Click Apply.
9. Click OK. The edited card will be saved.
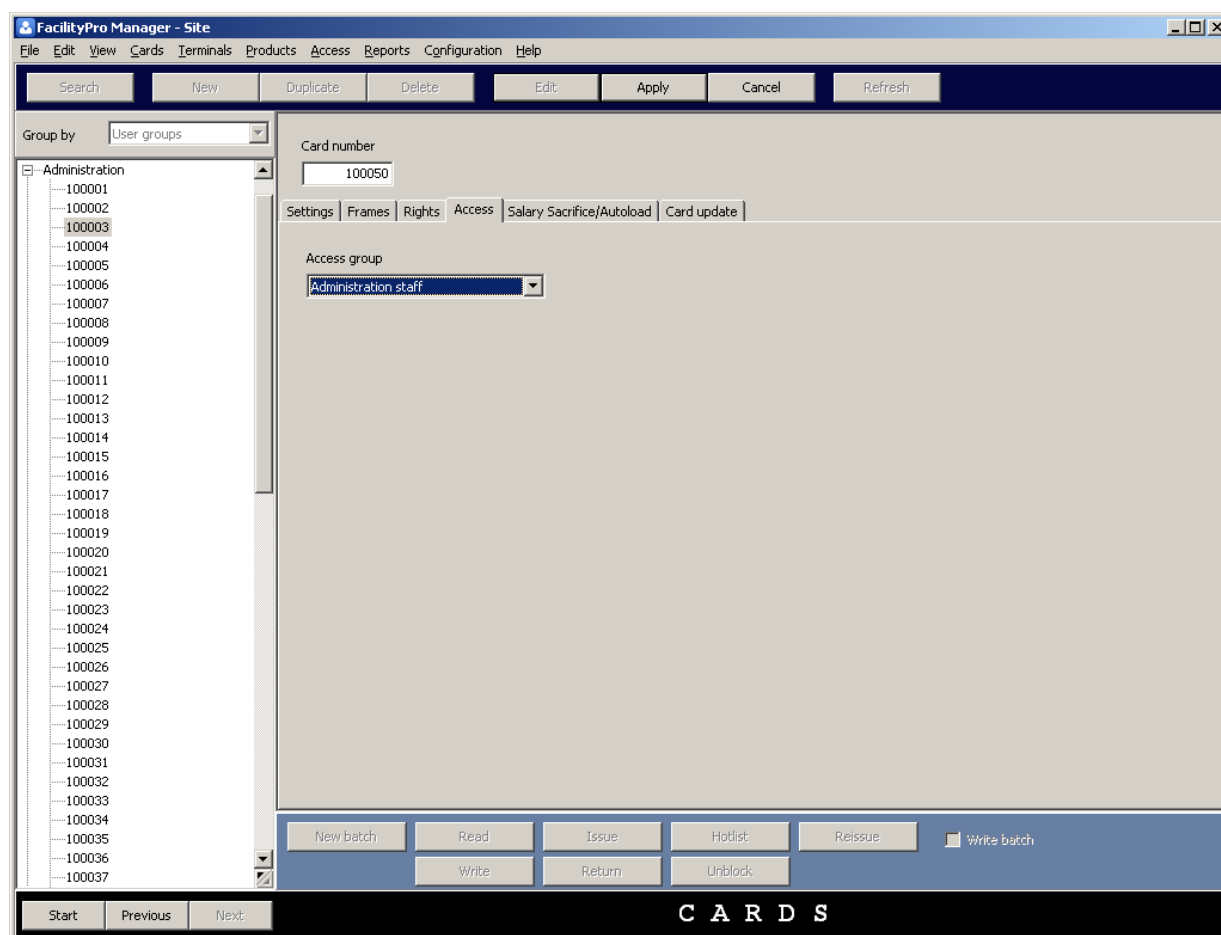
Figure 3-6 The tab 'Access' of the cards data screen

3.1.2.4 The tab 'Salary Sacrifice/Autoload'

The tab 'Salary Sacrifice/Autoload' is only visible if the Autoload module of FacilityPro Manager has been installed and activated (see FacilityPro Manager installation manual).

The Autoload Server (ALS) module of FacilityPro Manager allows cards to be automatically reloaded when inserted into a networked FacilityPro payment terminal in accordance with a credit amount stored for that card in a file that generated by an external administration system on the back-office computer. The amount can be different for each card or cardholder.

The Autoload commands for each card are stored in the database and are visible on the tab 'Salary Sacrifice/Autoload'. The changes are effected when a card is inserted at a terminal. The following changes can be effected using Autoload: adding value to the card balance.

The Autoload functionality can be used for webloading to cards. This is not described in detail in this version of the manual.

The fields of the tab 'Salary Sacrifice/Autoload' are listed and explained below:

1) Account: (read-only) shows which amount is stored in the Autoload e-purse account for this card (pending to be written to the card when inserted at an Autoload terminal)
2) Alsaccount2: (read-only) field for the future implementation of increasing a token value using Autoload
3) Webload password: password that will be accepted for webloading onto this card.

The tab 'Salary Sacrifice/Autoload' also shows which Autoload commands have been processed for the selected card, and whether the commands have been executed or are still pending, with all relevant data for each command (time, amount, etc.).

3.1.2.5 The tab 'Card update'

The tab 'Card update' is only visible if the PIM module of FacilityPro Manager has been installed. The field 'Card update (PIM)' of the settings tab of the site record (§8.1.1) will then be checked.
PIM stands for Post Issuance Managements of cards. It requires the PIM server to be installed and activated (see FacilityPro Manager installation manual). PIM is generally installed in the same directory as where FacilityPro was installed, default: C:\Program Files\Magna Carta\FacilityPro Manager\bin. It also requires that the IP address of the PIM server is entered as the value of the parameter 'Server_IP' of the machine types of all the terminals on the site where one wants PIM to be implemented (§4.3.1). Lastly, the authorisation levels for 'Card.card update (PIM)' and at least one of the functions 'Card.new balance', 'Card.change token values', 'Card.new tokens' and 'Card.hotlist' should have the value 'Available' (§8.3.1).

PIM makes it possible for an administrator to change the information written on a card, without the need to have the card, The changes for each card are stored in the database and

are visible on the tab 'Card update'. The changes are effected when a card is inserted at a terminal. The following changes can be effected using PIM:

1) adjusting the value of the card balance (§3.1.2.5.1)
2) changing the user group or cost centre a card belongs to (§3.1.2.5.2)
3) adding value to the counter of a token on the card (§3.1.2.5.3)
4) hotlisting a card (§3.1.2.5.4)
5) changing the card status of a card that is hotlisted or has been hotlisted and then blocked back to 'personalised' so that it can be used again. (§3.1.2.5.5)
6) adjusting the value of a frame on the card (§3.1.2.5.6)
7) changing the validity dates of a card (start date and end date, §3.1.2.5.2)

An important advantage of PIM is that there are no restrictions to the amount of cards that can be effectively hotlisted. FacilityPro terminals have a hotlist that can only contain 1000 card numbers, but PIM terminals will not work with the hotlist in the terminal but will check the PIM server.

When a card holder enters his card at a PIM terminal, the PIM terminal communicates with the PIM server to find out whether there are any PIM jobs pending for that card. If so, the terminal termporarily PIM-blocks the card, makes the changes while displaying 'Card is being updated', then unblocks the card and finally continues with a normal card transaction.
If the card is removed from the card reader while this process is taking place and before the card has been unblocked, the card will still be PIM-blocked. Next time the card is inserted in a PIM terminal or read in FPM, the process will continue so that the PIM jobs are executed and the card is unblocked. In the mean time, however, the card will be unusable in any non-PIM terminal.

3.1.2.5.1 Adjusting the balance of a card using PIM

You can increase or decrease the balance with an amount to be entered or set the value of the balance to '0' by entering the amount '-999,99'.

How to adjust the value of the balance on a card using PIM:

Note: You should only create PIM commands for cards that have been personalised. These can have any card status except 'No card'.

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to adjust the balance of.
4. Click the tab 'Card update'. You will see the tab 'Card update' (Figure 3-7).
5. Click Adjust card balance. You will see the dialog screen shown in Figure 3-8.
6. Type the amount you want to add to the card balance ('**12**' = £12 and not £0.12). (Entering an amount preceded by a minus will result in the amount being deducted from the card balance, and entering '-999,99' will result in the balance being changed to '0'.)
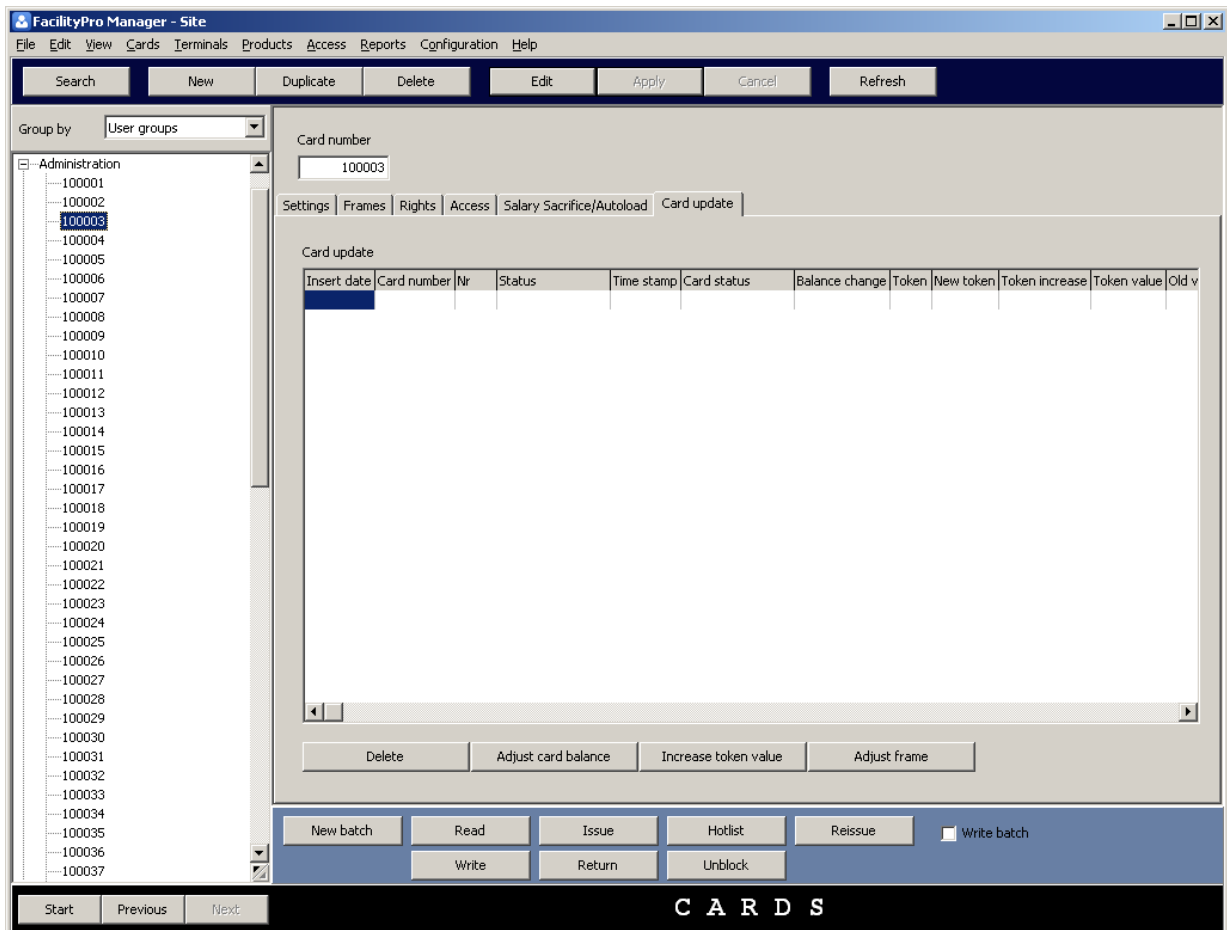
Figure 3-7 The tab 'Card update' of the cards data screen
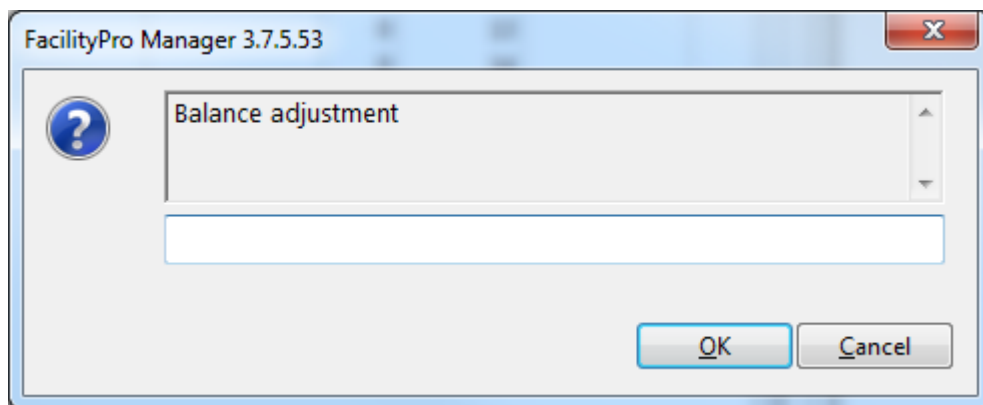
Figure 3-8 The balance adjustment dialog screen

7. Click OK. The PIM command will be added as a new record on the tab 'Card update' (Figure 3-9). It shows the date and time the command was given and the status of the command as 'To send'.

Figure 3-9 PIM command for balance increase 'To send'

8. When the card is next inserted at a terminal that has been configured as a PIM terminal (the value of the parameter 'server_ip' of the machine type of the terminal is the IP address of the PIM server, §4.3), the terminal will communicate with the PIM server and find that there is a PIM command for this card. The card balance will be changed in accordance with the PIM command before transactions with the card commence. If the tab 'Card update' is consulted after this time it will reflect the status 'Finished' for the PIM command and the time that the change was effected (Figure 3-10).

Figure 3-10 PIM command for balance increase 'Finished'

3.1.2.5.2 Changing the user group, cost centre or validity period of a card using PIM

How to change the user group, cost centre and/or validity period of a card using PIM:

Note: You should only create PIM commands for cards that have been personalised. These can have any card status except 'No card'.

1. Choose menu **Cards**.
2. Choose **Cards**. (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Select the card you want to change the user group, cost centre and/or validity period of.
4. If you want to change the user group, click the arrow next to the field 'User group'. You will see a list of all the existing user groups. Otherwise, go to step 6.
5. Select the new user group for this card. (If this new user group does not have a default cost centre (§3.4.1) you will also have to specify the cost centre, even if you are not changing it from its previous value).
6. If you want to change the cost centre, or have to specify it after changing the user group, repeat the two previous steps for the field 'Cost centre'.
7. If you want to change the start date or end date of the validity period of the card, adapt the value of the corresponding fields accordingly.

8. Click Apply. If you have changed the user group and/or the cost centre and the field 'Card holder' has a value you will see a message as shown in Figure 3-11, and you should Click Yes or No.
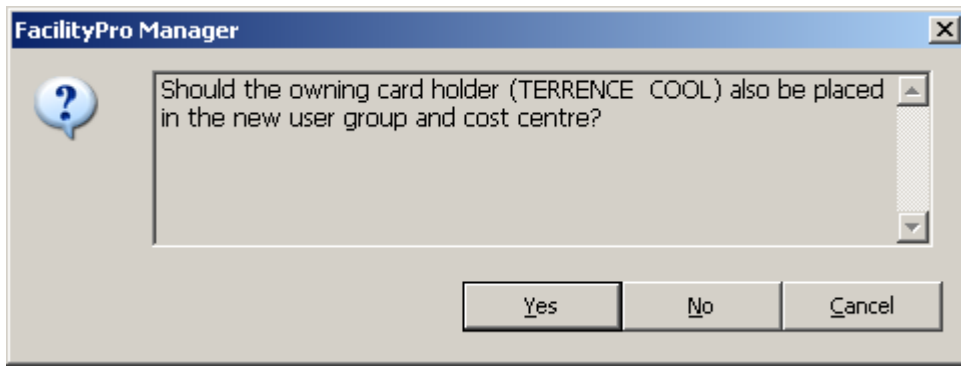
Figure 3-11 Change card holder to new user group and cost centre

9. Click OK. The edited card will be saved. 6 PIM commands will be added as new records on the tab 'Card update' (Figure 3-12, or as many as there are tokens on the card, §8.1.1) for a change in the user group and/or cost centre. 1 PIM command will be added for a change in the start date and 1 PIM command for a change to the end date. The records include the date and time the command was given and the status of the command as 'To send'.

Figure 3-12 PIM commands for changing tokens to match new user group and cost centre, 'To send'

10. When the card is next inserted at a terminal that has been configured as a PIM terminal (the value of the parameter 'server_ip' of the machine type of the terminal is the IP address of the PIM server, §4.3), the terminal will communicate with the PIM server and find that there are PIM commands for this card. It will overwrite the existing tokens on the cards with the tokens that belong to the new user group and cost centre and/or change the validity period of the card before transactions with the card commence. If the tab 'Card update' is consulted after this time it will reflect the status 'Finished' for the PIM commands and the time that the change was effected (Figure 3-13).
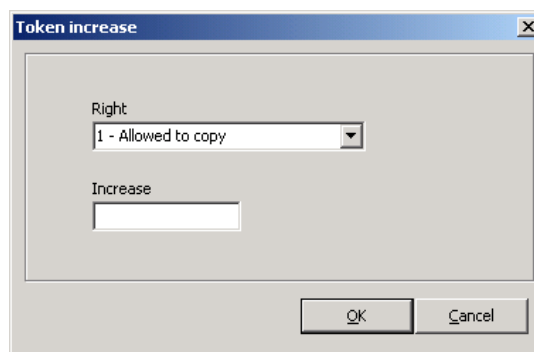
Figure 3-13 PIM commands for changing tokens to match new user group and cost centre, 'Finished'

3.1.2.5.3 Increasing the token value on a card using PIM

How to increase the value of the counter of a token on a card using PIM:

Note: You should only create PIM commands for cards that have been personalised. These can have any card status except 'No card'.

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to add token value to.
4. Click the tab 'Card update'. You will see the tab 'Card update' (Figure 3-7).
5. Click Increase token value. You will see the dialog screen shown in Figure 3-14.

Figure 3-14 Token increase dialog screen

6. Click the arrow next to the field 'Right'. You will see a list of the rights that are represented by the tokens on the card.
7. Select the right for which you want to increase the token value.
8. Click in the field 'Increase'.
9. Type the amount with which you want to increase the token counter for this right. If it is a subsidy right, the amount you type will signify a monetary amount (e.g. '**12**'= add £12). If it is a discount right the amount will signify a number of transactions (e.g. '**5**' in the field 'Increase' for the right '5 free coffee a day' will allow 5 more products in the product group 'Coffee' to be obtained for free on the day the counter is increased).
10. Click OK. The PIM command will be added as a new record on the tab 'Card update' (Figure 3-15). It shows the date and time the command was given and the status of the command as 'To send'.

MAGNA CARTA

Figure 3-15 PIM command for token increase 'To send'

11. When the card is next inserted at a terminal that has been configured as a PIM terminal (the value of the parameter 'server_ip' of the machine type of the terminal is the IP address of the PIM server, §4.3), the terminal will communicate with the PIM server and find that there is a PIM command for this card. It will add the specified amount to the token counter specified before transactions with the card commence. If the tab 'Card update' is consulted after this time it will reflect the status 'Finished' for the PIM command and the time that the change was effected (Figure 3-16).

Figure 3-16 PIM command for token increase 'Finished'

3.1.2.5.4 Hotlisting a card using PIM

When you add a card to the hotlist (§3.1.3.7) a PIM command is created to block the card. Therefore hotlisting a card is done the same way with or without PIM, but it is managed differently by the system.

3.1.2.5.5 Making a blocked or hotlisted card usable again using PIM

When you take a card off the hotlist (§3.1.3.7) a PIM command is created to change the card status to 'Personalised', thereby making it usable again. Therefore taking a card aoof the hotlist is done the same way with or without PIM, but it is managed differently by the system. Because a blocked card is no longer on the hotlist, it must first be added to the hotlist and then removed from the hotlist to create the PIM command that will unblock it.

How to change the card status of a card that has been hotlisted and possibly also blocked back to 'Personalised' so that it can be used again with PIM:

1. Choose menu **Cards**.
2. Choose **Cards**. (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)

3. Select the card that is hotlisted (card status = 'Hotlisted') or has been blocked (card status = 'Blocked').

4. If the card status = 'Blocked', click on the action button Hotlist. You will be asked whether you want to add the card to the hotlist. Click OK. (This is necessary because a PIM command to make the card usable again can only be given to a hotlisted card and not to a blocked card).

5. Click on the action button Hotlist. You will be asked whether you want to take the card off the hotlist. Click OK. The PIM command will be added as a new record on the tab 'Card update' (Figure 3-17). It shows the date and time the command was given and the status of the command as 'To send'. A PIM command to hotlist a blocked card that was previously added in step 4 will be overruled by this new command.

Figure 3-17 PIM commands to make a blocked card usable again ('To send')

6. When the card is next inserted at a terminal that has been configured as a PIM terminal (the value of the parameter 'server_ip' of the machine type of the terminal is the IP address of the PIM server, §4.3), the terminal will communicate with the PIM server and find that there is a PIM command for this card. It will change the card status to 'Personalised' and then transactions with the card can be carried out. If the tab 'Card update' is consulted after this time it will reflect the status 'Finished' for the PIM command and the time that the change was effected (Figure 3-18).

Figure 3-18 PIM commands to make a blocked card usable again ('Finished')

3.1.2.5.6 Adjusting the value of a frame using PIM

Frames either contain the same data for all cards within a user group, when a frame type is assigned to a frame of a user group (§3.4.2.2), or data which is card specific, when a a frame

type is assigned to a frame of a specific card (§3.1.2.1). Only this last type of frame can be given a new value using PIM. That frame type must have the value 'Cards' in the field 'Table' and may not have a value in the field 'Field' (§8.6.1) and must first have been assigned to a frame of the user group of that card (§3.4.2.2).

How to adjust the value of a frame using PIM:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to adjust the value of a frame of.
4. Click the tab 'Card update'. You will see the tab 'Card update' (Figure 3-7).
5. Click Adjust frame. You will see the dialog screen shown in Figure 3-19.
6. Click on the drop-down arrow next to the field 'Nr' and select the desired frame. Only card specific frames will be shown, as explained in the introduction to this paragraph.
7. Click in the field 'Data' and enter the new value for the frame.
8. Click OK. The PIM command will be added as a new record on the tab 'Card update'. It shows the date and time the command was given and the status of the command as 'To send'.
9. When the card is next inserted at a terminal that has been configured as a PIM terminal (the value of the parameter 'server_ip' of the machine type of the terminal is the IP address of the PIM server, §4.3), the terminal will communicate with the PIM server and find that there is a PIM command for this card. It will adjust the value of the specified frame to the value entered in the field 'Data' before transactions with the card commence. If the tab 'Card update' is consulted after this time it will reflect the status 'Finished' for the PIM command and the time that the change was effected.
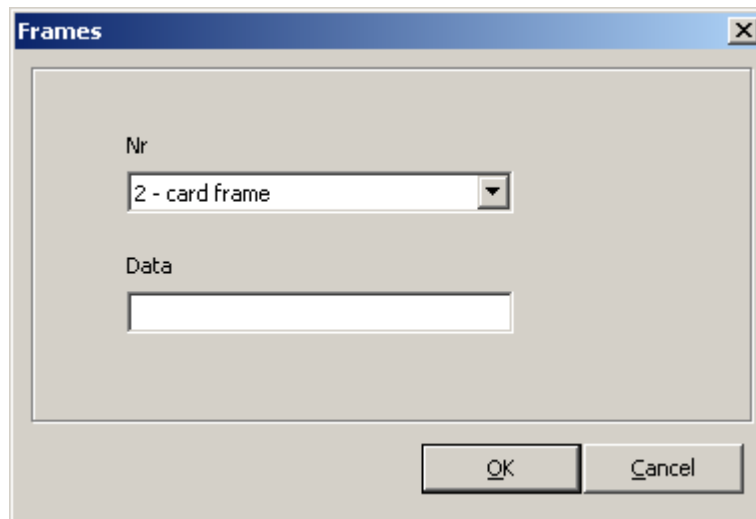
Figure 3-19 Adjust frame dialog screen

3.1.3 The action buttons of the cards data screen

The cards data screen has a number of action buttons and a 'Write batch' check-box, which are discussed in the following paragraphs.

3.1.3.1 Creating a card holder from the cards data screen: New

Generally you will add new card holders from the card holders data screen. You can also create a new card holder from the cards data screen at the time of creating a card for that card holder or assigning an existing card to that card holder. In this case, you will only fill in the name of the new card holder. Other data, such as address data, can be filled in later from the card holders data screen for that card holder.

How to create a new card holder from the cards data screen using the action button New next to the field 'Card holder':

1. Press New next to the field 'Card holder' on the cards data screen. You will see a dialog screen as in Figure 3-2.
2. Fill in the name of the new card holder in the format [First name (,middle,) Last name].
3. Click OK.
4. When you save the new card you will be asked if you wish to add the new card holder to the card holder table (Figure 3-3) and should click Yes.

3.1.3.2 Creating several cards at once: New batch

With the action button New batch you can create one or more cards in the database at the same time. The cards will automatically be assigned successive card numbers. You can create anonymous cards for a specific user group and cost centre. You can create cards for all the card holders of a user group and cost centre, that do not yet have a card. Or you can even create cards for all the card holders of all user groups and/or all cost centres, who do not yet have a card. If the physical cards corresponding to these cards in the database have been personalised by the manufacturer, you can indicate that the cards to be created in the database must be given the card status personalised.

You can define the numbers of the new cards in the database yourself, or let FacilityPro Manager assign numbers to the cards. FacilityPro Manager will assign card numbers in such a way as to keep the cards of each user group together. It will multiply the value of the field 'User group ID' (§3.4.1) with 100,000 and then assign the card number following the highest existing card number in that range to the first card in the batch of cards to be created. If you want to follow this system of disjunct card numbers per user group, you must therefore take care to assign numbers within the range corresponding to the user group for which the cards are, when you assign card numbers yourself.

How to create a batch of anonymous cards:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Click New batch. You will see a dialog screen (Figure 3-20).

---

4. Double-click in the field 'Number of cards'.
5. Type the number of cards that you want to create.
6. If you want the card numbers of the new cards to be automatically assigned by FacilityPro Manager go to step 9, otherwise, click in the check-box next to 'Automatic, disjunct numbers per user group' to un-check it.
7. Click in the field 'First card number'.
8. Type the first number for the new batch of cards. The card number you assign here must be such that that number and enough consecutive numbers to accommodate the number of cards you are creating, do not already exist in the database. Otherwise, you will get an error message 'CardNR [number] already there' after executing step 0.
9. Click in the field 'Already personalised' if the physical cards corresponding to the cards you are creating in the database have already been written (by the manufacturer).
10. Click the arrow next to the field 'User group'. You will see a list of existing user groups. Select the user group for which you want to create the cards.
11. Click the arrow next to the field 'Cost centre'. You will see a list of existing cost centres. Select the cost centre for which you want to create cards.
12. Click OK. FacilityPro Manager will show the message '[number] card(s) will be added. Continue?'.

Figure 3-20 The New batch dialog screen

13. Click OK again. The cards will be created and the new card numbers will be included in the record list.

How to create a batch of cards in the database for card holders without a card:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Click New batch. You will see a dialog screen (Figure 3-20).
4. Click in the field 'Cards for card holders without card'.
5. If you want the card numbers of the new cards to be automatically assigned by FacilityPro Manager go to step 8, otherwise, click in the check-box next to 'Automatic, disjunct numbers per user group' to un-check it.
6. Click in the field 'First card number'.
7. Type the first number for the new batch of cards. The card number you assign here must be such that that number and enough consecutive numbers to accommodate the number of cards you are creating, do not already exist in the database. Otherwise, you will get an error message 'CardNR [number] already there' after executing step 14.
8. Click in the field 'Already personalised' if the physical cards corresponding to the cards you are creating in the database have already been written (by the manufacturer).
9. To create cards for card holders of all the user groups, click in the check-box 'All' next to the field 'User group' and go to step 11.
10. Click the arrow next to the field 'User group'. You will see a list of existing user groups. Select the user group for which you want to create the cards.
11. To create cards for card holders of all the cost centres, click in the check-box 'All' next to the field 'Cost centre' and go to step 13.
12. Click the arrow next to the field 'Cost centre'. You will see a list of existing cost centres. Select the cost centre for which you want to create cards.
13. Click OK. FacilityPro Manager will show the message 'Make cards for User group [user group] and Cost centre [cost centre], continue?'.
14. Click OK. The cards will be created and FacilityPro Manager will show the message '[number] card(s) inserted'.
15. Click OK. The new card numbers will be included in the record list.

3.1.3.3 Reading a card: Read

With the action button Read, you can read data from a card that is inserted in the PC card reader.

When the action button Read is used, the balance read from the card becomes visible in the field 'Last seen balance' of the cards data screen, and the tokens read from the card can be seen on the tab 'Rights' of the cards data screen.

The action button Read can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

If the card read is on the hotlist, and has not yet been blocked at a terminal, the card will be blocked upon reading by FPM.

If the card is PIM-blocked (see §3.1.2.5) this will be indicated and unfinished PIM jobs will be processed and the card unblocked.

How to read a card with the action button Read:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Place the card in or on the PC card reader.
4. Click Read.
   a) If the keys that are written on the card are not equal to the keys known in the database, you will receive an error message as in Figure 3-21 or Figure 3-22.

Figure 3-21 Error message 'Wrong site keys'
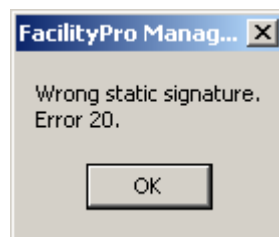
Figure 3-22 Error message 'Wrong static signature'

   b) If the site code, which is written on the card, is not equal to the site code in the database, you will receive an error message (Figure 3-23).
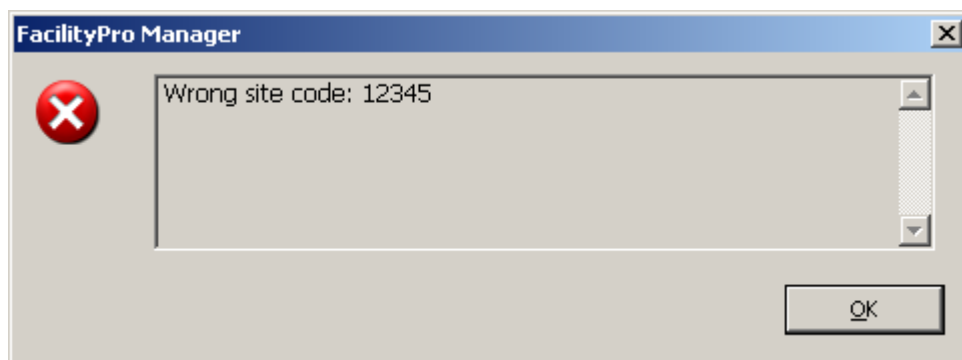
Figure 3-23 Error message 'Wrong site code'

   c) If there is a record in the card table with the same card number as the card read, and the data read from the physical card corresponds to the data of that card record, you will see the message 'Card found'. Click OK. That card will be selected and the field 'Last seen balance' will show the balance read from the card. Click the tab 'Rights' to see the tokens read from the card.
   d) If there is no record in the card table with the same card number as the card read, FacilityPro Manager will show the message 'Unknown card number

[number], add to database?' (Figure 3-24). To add the card to the database, click Yes, Apply, OK. Otherwise, click No.
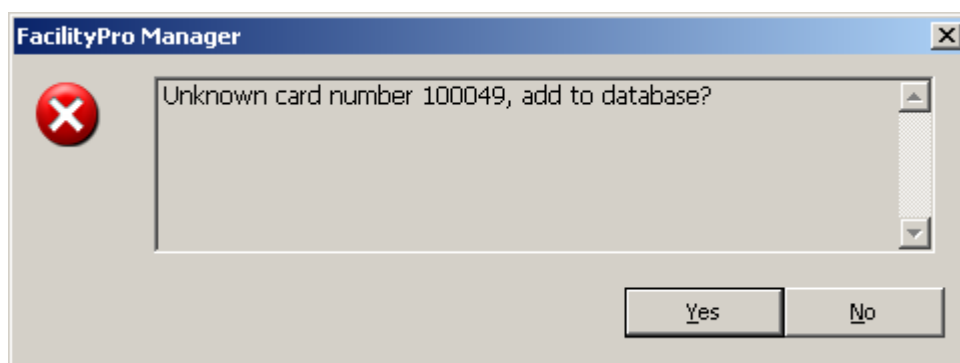
Figure 3-24 Unknown card number

e) If there is a record in the card table with the same card number as the card read, but the tokens that have been read from the card are not equal to the tokens for that card in the card table, you will see a warning message (Figure 3-25), suggesting that you should overwrite the data on the card with the data from the card table with the action button Write (§3.1.3.4). Click OK. You will see the message 'Card found' and the card will be selected, the tab 'Rights' will be active, showing the data disparity between the card in the database and the card in the PC card reader.
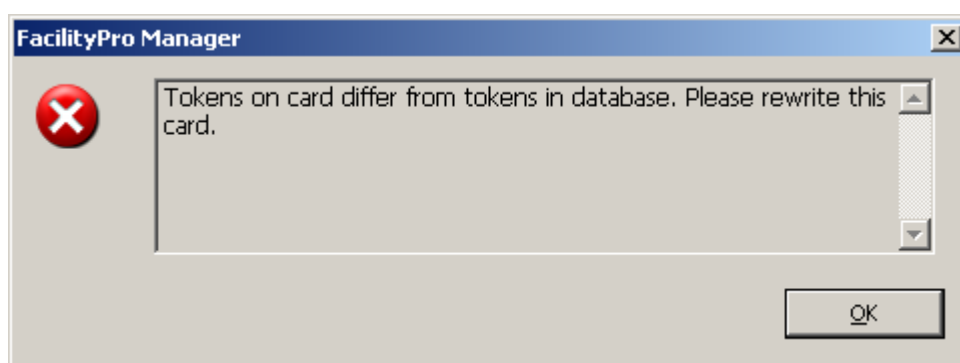
Figure 3-25 Warning message

f) If there are tokens on the card which do not exist in the database you will see a warning message (Figure 3-26). Click OK.
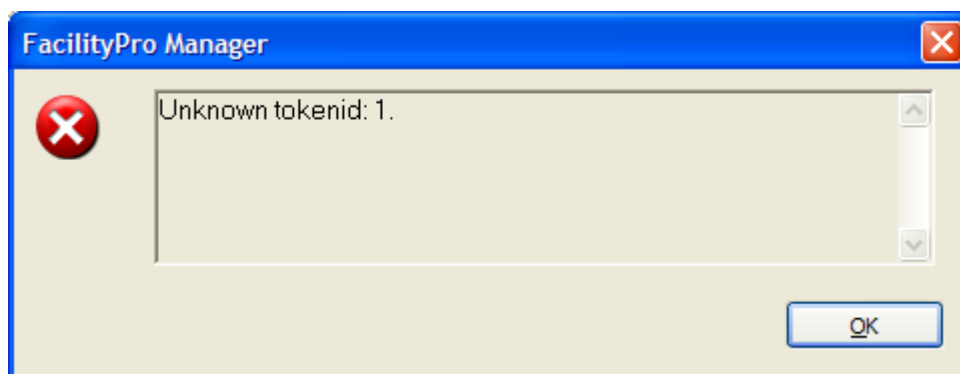
Figure 3-26 Unknown tokenid

3.1.3.4 Writing data on a card: Write

With the action button Write, you can write the data of a card in the database to a card that is inserted in the PC card reader. Writing the data of a card in the database to a physical card results in the value of the field 'Card status' of that card changing to 'personalised'.

When you use the action button Write the value of the field 'Start balance' of the user group to which the card belongs (§3.4.1) will be written to the card.

The action button Write can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

How to write data on a card with the action button Write:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to personalise.
4. Place the card in or on the PC card reader.
5. Click Write. You will see a message as in Figure 3-27. If the card already has the card status 'personalised', in other words has been previously written, you will see a message as shown in Figure 3-28 if the authorisation level for 'Card.rewrite card number' has the value 'Available' (§8.3.1) or as shown in Figure 3-29 otherwise.
6. Click OK. FacilityPro Manager will show the message 'Card has been written'.
7. Click OK.
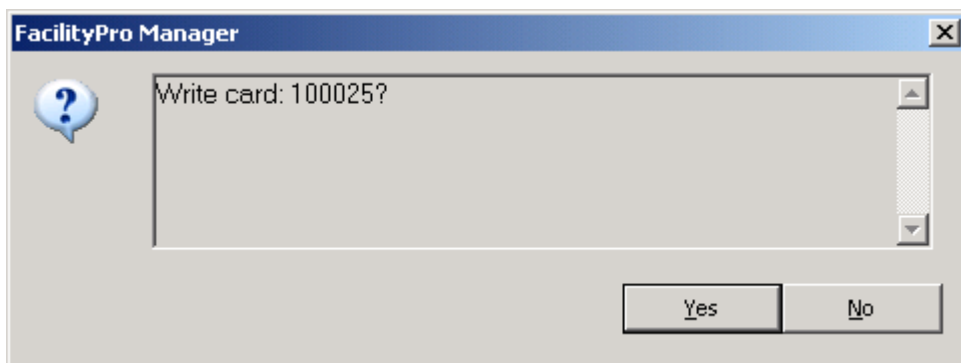
Figure 3-27 Write card
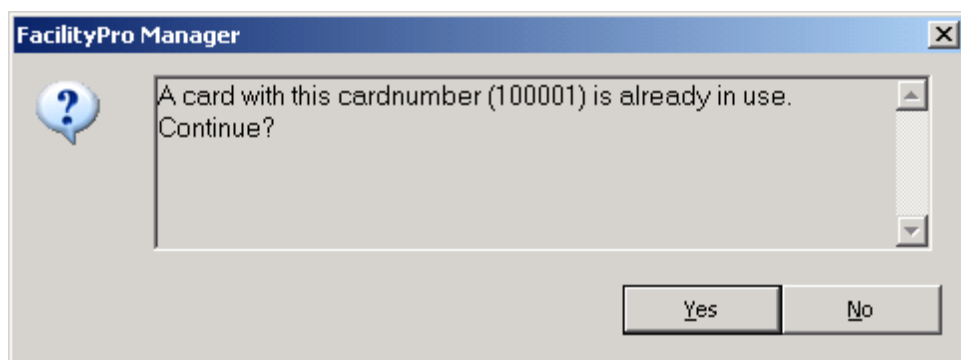
Figure 3-28 Rewrite card
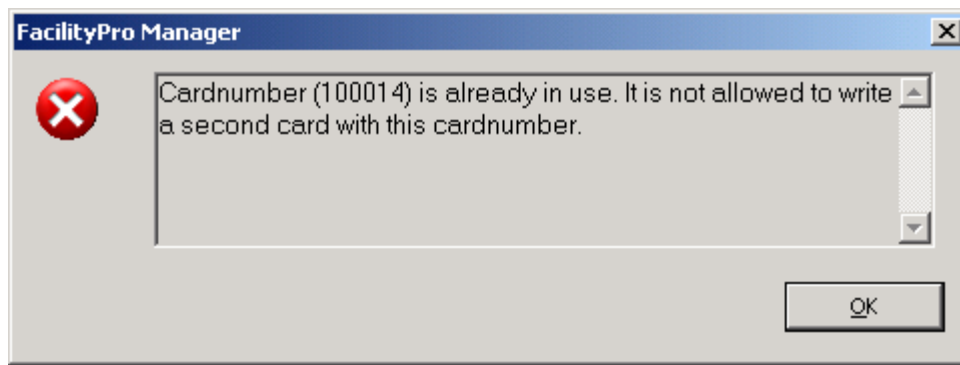
Figure 3-29 Not allowed to rewrite card

3.1.3.5 Issuing a card: Issue

When a system administrator gives out a physical card to a card holder, he can update the data of the card record in the database accordingly with the action button Issue. The field 'Card status' will be given the value 'issued'. It is not strictly necessary to set the card status to 'issued', but we recommend it. It enables the system administrator to distinguish between cards, which have been given out to card holders, and personalised cards, onto which the data has been written, but which are still waiting to be issued. A card can only be issued when it has the card status 'personalised'. Cards, which are bought at a terminal, are immediately given the status 'issued', because they are written and given to the card holder at the same time.

How to change the status of a card from 'personalised' to 'issued' with the action button Issue:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you have issued or want to issue.
4. Click Issue. You will see the message 'Issue this card?'.
5. Click OK. On the cards data screen you will see that the value of the field 'Card status' has changed to 'issued'.

3.1.3.6 Returning a card: Return

When a card holder returns a physical card to a system administrator, the data of the card record in the database can be updated accordingly with the action button Return. The card will be blocked for security reasons. The field 'Card status' will be given the value 'blocked'. The card can then not be used until it has been reissued to another card holder, whereby it will of course be unblocked.

The action button Return can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

How to change the status of a card from 'issued' to 'blocked' and make the card unusable when a card is returned by the card holder, with the action button Return:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Place the card in or on the PC card reader.
4. Click Return. The card being returned will be selected. FacilityPro Manager will show the message 'Return this card? Card number [number]'. (If there is no card in the record list with the same card number as the card being returned, FacilityPro Manager will show the message 'Unknown card number [number], add to database?' (Figure 3-24). To add the card to the database, click Yes, OK, Apply, OK and then start step 4 again to return the card. Otherwise, click No.)
5. Click OK. FacilityPro Manager will show the message 'Card is blocked' and subsequently the message 'Please take card. Balance €[balance] cleared'. This allows you to return the amount that was on the returned card to the card holder if you wish. On the cards data screen you will see that the value of the field 'Card status' has changed to 'blocked'.

3.1.3.7 Managing the hotlist: Hotlist

A card holder can lose his card or it can be stolen. To prevent misuse of a lost or stolen card it can be placed on the hotlist. Each time a collector collects data from a terminal, the hotlist on that terminal will be updated. As soon as a hotlisted card is used at a terminal, the terminal will recognise that card and block it, making it unusable. The next time data is collected from that terminal, FacilityPro Manager will change the card status of that card to 'blocked', and delete the card from the hotlist.

Due to memory limitation, terminals can only recognise 1000 cards from the hotlist (for terminals with a MBX1 control unit 300). The hotlist in the database has no limit. The cards are placed on the hotlist in order of the date that they are hotlisted. The most recently hotlisted card will be in the first position. Once there are more than 1000 (300 for MBX1) cards on the hotlist, the terminals will not block a card used if it is in a position higher than 1000, but the transaction with the hotlisted card will be recognised and the card will be moved up to the first position and blocked the next time it is used.

If the PIM module has been installed, there are effectively no limitations to the amount of cards that can be effectively hotlisted. PIM terminals will not work with the hotlist in the terminal but will check the PIM server. Each time a card is hotlisted or removed from the hotlist, this will create a PIM command and the next time the card is inserted at a terminal the card will be blocked or unblocked accordingly.

Only cards with the card status 'personalised' or 'issued' can be hotlisted.
Sometimes, you might want to remove a card from the hotlist, for instance if a lost card has been found by the rightful owner before it was blocked at a terminal.

> *WARNING:* A maximum of 1000 hotlisted cards can be stored in the terminals (300 for terminals with MBX1 control unit). If there are more than 1000 cards on the hotlist, the cards that have been on the list longest will not be known to the terminals and can therefore be used at a terminal even though they have been hotlisted. The administrator must take this into account. If such a card is used at a terminal and the transaction is collected from the terminal, the fact that a hotlisted card has been used will be recognised and the card will be placed at the top of the hotlist, after which it can safely be assumed it will be blocked the next time it is used.

How to place a card on the hotlist with the action button Hotlist:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to place on the hotlist.
4. Click Hotlist. You will see a dialog screen (Figure 3-30).
5. Click OK. On the cards data screen you will see that the value of the field 'Card status' has changed to 'hotlisted'. If the hotlist already contained 1000 cards or more, you will see a warning message.
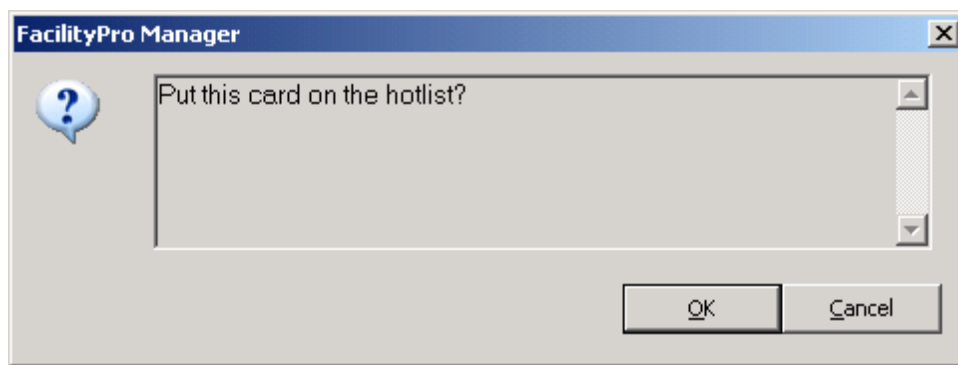
Figure 3-30 The hotlist dialog screen

How to delete a card from the hotlist:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to delete from the hotlist.
4. Click Hotlist. FacilityPro Manager will ask you 'Remove this card from the hotlist?'
5. Click OK. On the cards data screen you will see that the value of the field 'Card status' is no longer 'hotlisted'.

3.1.3.8 Unblocking a card: Unblock

In some cases you might want to unblock a card, which has the card status 'blocked'. An example: somebody tried to use a lost or stolen card at a terminal, which caused the card to be blocked by that terminal. The card finder then decides to return the card to the system administrator. The card can now be given back to its rightful owner, but first it has to be unblocked.

The action button Unblock can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

How to unblock a card:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to unblock.
4. Place the card in or on the PC card reader.
5. Click Unblock. FacilityPro Manager will show the message 'Card found'. (If there is no card in the record list with the same card number as the card presented, FacilityPro Manager will show the message 'Unknown card number [number], add to database?' (Figure 3-24). To add the card to the database, click Yes. Otherwise, click No.)
6. Click OK. FacilityPro Manager will show the message 'Unblock this card?' (if the card you presented was not blocked, you will see the message 'Card is not blocked').
7. Click OK. FacilityPro Manager will show the message 'Card has been unblocked.'. On the cards data screen you will see that the value of the field 'Card status' is no longer 'blocked'.

3.1.3.9   Reissuing a card: Reissue

The action button Reissue will only be active if the authorisation level for 'Card.reissue' has been set to available (§8.3.1).
In some cases you might wish to issue a card with the same card number, but still be able to distinguish it from the previous card with the same number, which should no longer be accepted at terminals, in other words which should be hotlisted. You will then reissue the card. The database will keep track of the issue number and ensure that earlier issue numbers are hotlisted.

How to reissue a card:

1. Coose menu **Cards**.
2. Choose **Cards**.
3. Select the card you want to reissue.
4. Click Reissue. You will see the message shown in Figure 3-31.
5. Click OK. The card status changes to 'no card' and the issue number is augmented by 1. The card number with the previous issue number is added to the hotlist. You still need to write the card (§3.1.3.4). The balance will be set to the start balance of the group (usually 0). If you wish to write the last known balance of that card to the new card, you must use card service where the last seen balance will still be shown (§3.3.1).
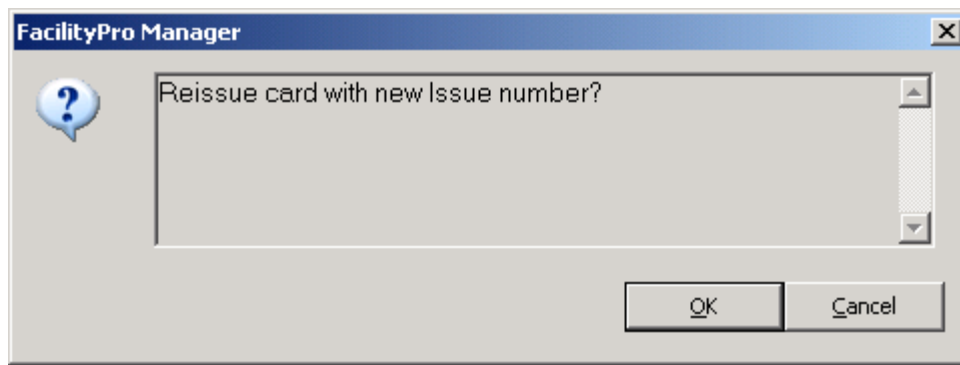
Figure 3-31 Reissue card

3.1.3.10 The action button Balance transfer

The action button Balance transfer will only be active if the authorisation level for 'Card.balance transfer' has been set to available (§8.3.1).

In some cases you might wish to transfer the last known balance of a card to another card, for instance if the old card has been lost or stolen or has become defective. The action button Balance transfer transfers the last known balance of a card to a card with another card number. The assumption is that the card from which the balance is transferred will no longer be used. It will be placed on the hotlist. The card you transfer the balance to can be a new card that you have just created (e.g. to replace the old card), or it can be an existing card.

If the card you want to transfer the balance to is available, you can effectuate the transfer by placing the card on the PC card reader. Alternatively, if PIM functionality is used at your site (see §3.1.2.5), you can enter the card number of the card. A PIM job will be created and visible on the tab 'Card update' for that card on the cards data screen.

The card the balance is transferred from is placed on the hotlist. A PIM job is created to deduct the balance from the card and block the card upon next usage.

Note: If the action button Balance transfer is used at a site where the terminals are used off-line, the card the balance is transferred from cannot be blocked and if it is still in use that balance will effectively be doubled, for it is still on the old card and now also on the card it was transferred to. Therefore, you must be sure that the source card will no longer be used.

How to transfer the balance of a lost/stolen or defective card to a new card using a PC card reader:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card from which you want to transfer the balance to another card and place the card to which you want to transfer the balance in or on the PC card reader.
4. Click Balance transfer. You will see a message as in Figure 3-32. If the card selected and the card place in or on the PC card reader are the same, you will see the message shown in Figure 3-33.
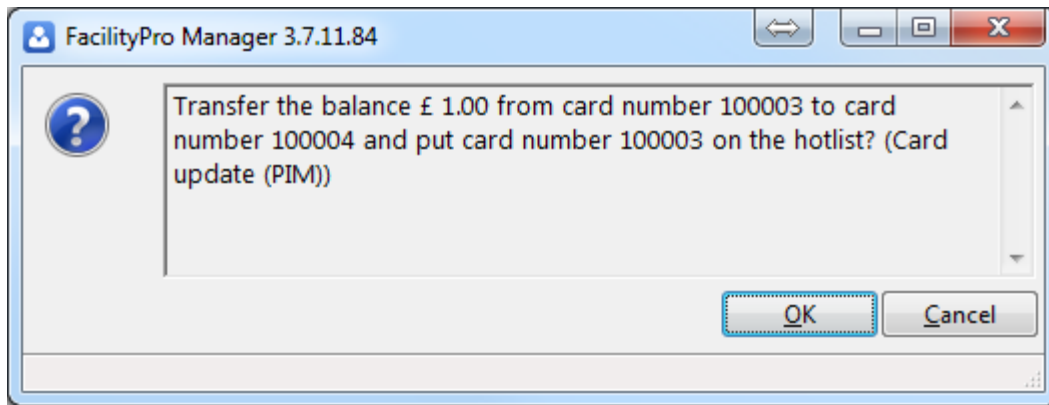
Figure 3-32 Balance transfer
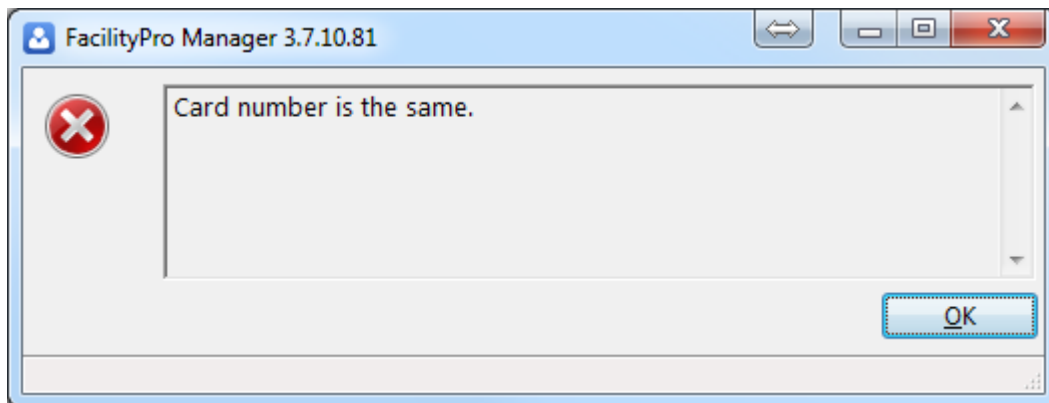
Figure 3-33

5. Click OK. You will see a message as in Figure 3-27.
6. Click OK. The balance will be written to the destination card. The source card (the selected card) will be placed on the hotlist and PIM jobs will be created to deduct the balance from and block the card upon first usage. You will see a message as in Figure 3-34.

Figure 3-34 Balance transfer results

7. Click OK.

How to transfer the balance of a lost/stolen or defective card to a new card using PIM functionality:

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Select the card from which you want to transfer the balance to another card (and if there is a PC card reader make sure there is no card in or on the PC card reader).
4. Click Balance transfer. You will see a message as in Figure 3-35.
5. Enter the card number of the card to which you want to transfer the balance of the selected card and click OK. You will see a message as in Figure 3-36. If the card selected and the card number entered are the same, you will see the message shown in Figure 3-33.
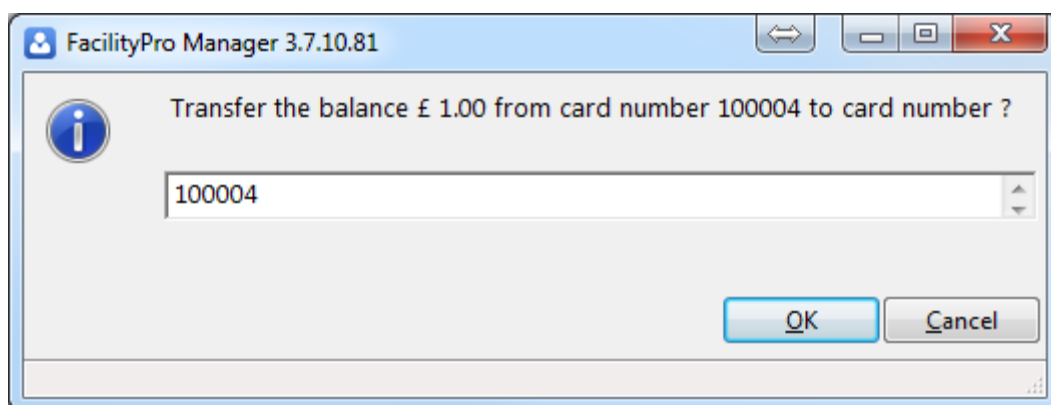
Figure 3-35 Balance transfer
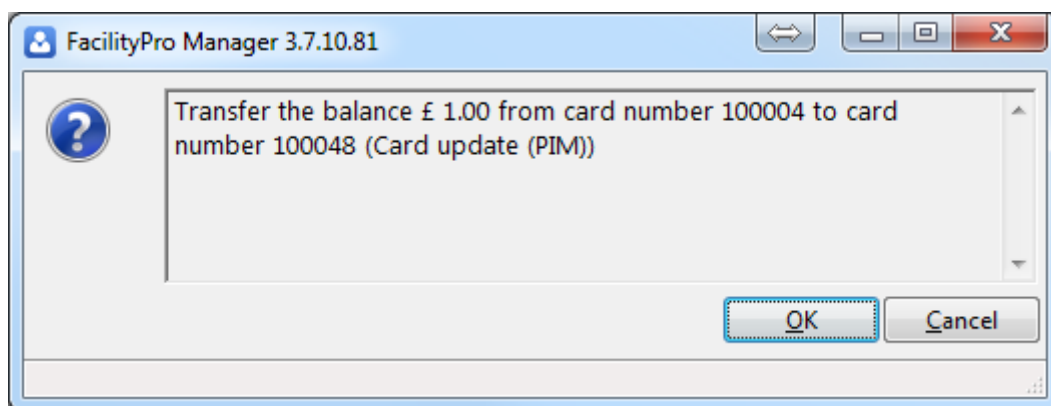
Figure 3-36 Balance transfer

6. Click OK. A PIM job will be created to add the balance to the destination card, the source card (the selected card) will be placed on the hotlist and PIM jobs will be created to deduct the balance from and block the card upon first usage. You will see a message as in Figure 3-34.
7. Click OK.

3.1.3.11 The check-box 'Write batch'

With the check-box 'Write batch', you can write the data of a number of cards in the database to the cards, which are placed one after the other in or on the PC card reader. You will have to enter the card numbers of the first and last cards you want to write. All the consecutive card numbers, starting with the first and ending with the last number entered, will be written. Writing the data of a card in the database to a physical card results in the value of the field 'Card status' of that card changing to 'personalised'.

The check-box 'Write batch' can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

How to write a batch of cards with the check-box 'Write batch':

1. Choose menu **Cards**.
2. Choose **Cards**.
3. Place the card which you want to be written first in or on the PC card reader.
4. Click in the check-box 'Write batch'. You will see a dialog screen (Figure 3-37). The field 'Start card number' is selected.
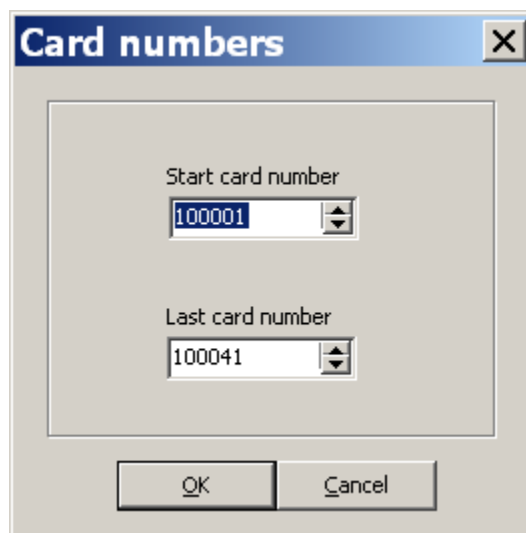
Figure 3-37 The 'Write batch' dialog screen

5. Type the number of the first card in the database that you want to personalise.
6. Double-click in the field 'Last card number' and type the number of the last card in the database that you want to personalise.
7. Click OK.
8. FacilityPro Manager will show the message 'Card has been written. Remove card and place new card.' Remove the card from the PC card reader and place the next card to be written.
9. Repeat step 8 until the message 'Card has been written. Write batch completed.' appears.
10. Click OK.

3.1.3.12 Euroconvert

When a site is in a transition period, converting from one currency to another (e.g. £ -> €), the line 'Advancedsettings=1' must be added to the paypro.ini file (found in the directory where FacilityPro was installed, default: C:\Program Files\Magna Carta\FacilityPro Manager\bin). The authorisation level for 'Card.euroconvert' should be set to available (§8.3.1). The field 'E-day' of the site record should be given a value.
The action button Euroconvert will then be active. It can be used to change the currency of a card to the new currency and convert the value of the balance on the card into that currency.

3.2   Card holders

Card holders are the users in an electronic transaction system. They have one or more FacilityPro cards with which they can buy or receive products.
On the card holders data screen, the record list is a list of all the card holders. From this screen you can view, create, edit, and delete card holders.

3.2.1   Creating a card holder in the database
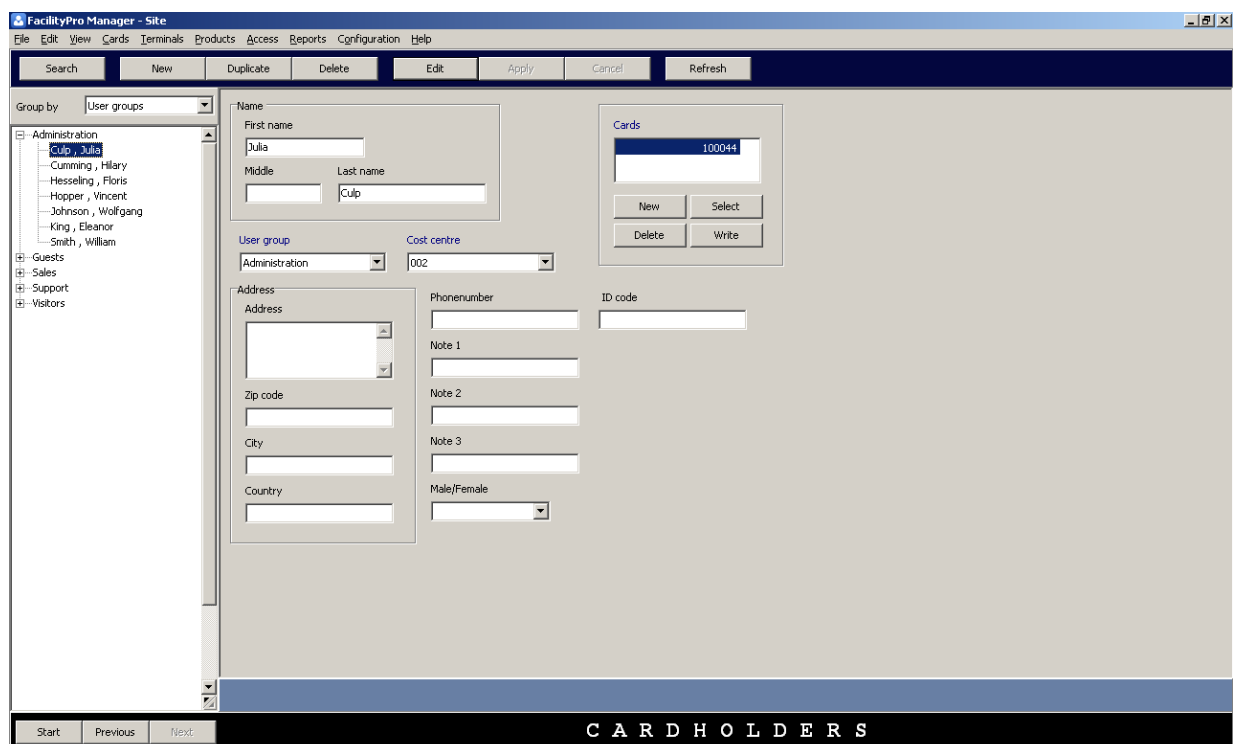
The fields of the data entry area of the cards data screen (when the tab 'Settings' is active) are listed and explained below. The fields marked * must be assigned a value:

1) First name (Name)
2) Middle (Name)
3) Last name* (Name)
4) User group*: user group to which the card belongs
5) Cost centre*: cost centre to which the card belongs
6) Address
7) Zip code
8) City
9) Country
10) Phone number
11) ID code
12) Note 1
13) Note 2
14) Note 3
15) M/F: the sex of the card holder
16) Cards: a list of the cards held by this card holder

How to create a card holder:

> *Note: To create a card holder the user group and cost centre the card holder belongs to must exist in the database.*

1. Choose menu **Cards**.
2. Choose **Card holders**. You will see the card holders data screen (Figure 3-38). (The card holders should be grouped by user group.)
3. Click New.
4. Edit the fields 'Last name', 'User group' and 'Cost centre', and any other fields of the data entry area that you want to fill in (§2.1.2.4).
5. Click Apply.
6. Click OK. The new card holder will be saved. The record list will include the last name of this new card holder.

Figure 3-38 The card holders data screen

3.2.2 The action buttons of the card holders data screen

From the card holders data screen it is possible to create a new card for a card holder, to delete a card held by that card holder, to assign an existing, anonymous card, to a card holder and to write a card using the action buttons New, Delete, Select and Write. These tasks could also be effected from the cards data screen.

3.2.2.1 Creating a new card for a card holder: New

When you create a new card in the database for a specific card holder, FacilityPro Manager will assign a card number to this card in such a way as to keep the cards of each user group together. It will multiply the value of the field 'User group ID' (§3.4.1) with 100,000 and then assign a card number within that range (e.g. card holders of user group STUDENT will have cards 100001..199999, card holders of user group PERS-LA will have cards 200001..299999, etc.). If you do not want the cards per user group to have disjunct numbers, and you want to assign the card numbers yourself, you must not create new cards in the database in this way.

How to create a card for a card holder:

1. Choose menu **Cards**.
2. Choose **Card holders**.
3. Select the card holder you want to create a card for.
4. Click New under the field 'Cards'. FacilityPro Manager will ask you 'Make a card for this card holder?'.
5. Click OK. A new card will be created. In the field 'Cards' you will see the card number of the new card.

3.2.2.2 Deleting a card of a card holder: Delete

How to delete a card held by a card holder:

1. Choose menu **Cards**.
2. Choose **Card holders**.
3. Select the card holder that owns the card you want to delete.
4. Click Delete under the field 'Cards'. FacilityPro Manager will ask you 'Remove card?'.
5. Click OK. The card will be deleted and will no longer appear in the field 'Cards'.

3.2.2.3 Assigning an existing card to a card holder: Select

How to assign a card to a card holder:

1. Choose menu **Cards**.
2. Choose **Card holders**.
3. Select the card holder that you want to assign a card to.
4. Click Select under the field 'Cards'. FacilityPro Manager will show you a list of the card numbers that exist for this user group and cost centre.
5. Click the card you want to assign to this card holder.
6. Click OK. The card will be assigned to this card holder. In the field 'Cards' you will see the card number of the card you have assigned to this card holder. If the card you have assigned already belongs to a card holder, you will see an error message.

3.2.2.4 *Writing a card for a card holder: Write*

With the action button Write, you can write the data of a card in the database that belongs to the selected card holder to a card that is inserted in the PC card reader. Writing the data of a card in the database to a physical card results in the value of the field 'Card status' of that card changing to 'personalised'.

When you use the action button Write the value of the field 'Start balance' of the user group to which the card belongs (§3.4.1) will be written to the card.

The action button Write can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

How to write a card for a card holder:

1. Choose menu **Cards**.
2. Choose **Card holders**.
3. Select the card holder that you want to write the card for.
4. In the field 'Cards' select the card you want to write.
5. Click Write under the field 'Cards'.
6. You will see the message 'Write card: [card number]?'.
7. Click OK. FacilityPro Manager will show the message 'Card has been written'.
8. Click OK.

3.3   Card service

From the card service screen certain data on a physical card can be edited, namely the balance, the period of validity of the card, and the counters of the tokens on the card. The tokens on a card represent rights. Sometime rights (§5.4.1) are defined in such a way that the right may only be granted a limited number of times per period. For subsidy rights the amount of subsidy left has to be kept track of. The tokens representing the right on the card therefore include a counter of which the value determines how many times the card holder can still use that right or how much subsidy is left. One might wish to edit the value of such a counter on occasion.

The card service screen can only be used if a PC card reader has been connected to the workstation you are working on and is operational. The data for the PC card reader must have been entered for this workstation and the PC card reader must have been enabled (§8.4.1.3).

The card service screen is not a data screen, as it does not show all the records of the card table. It shows only one card at a time, and shows only some of the data of that card. Depending on the levels of authorisation of the administrator (§8.3), from this screen one can increase and/or decrease the balance on a card, and edit the period of validity of the card and the counters of the tokens on the card. Through this function of FacilityPro Manager a card holder might be able to make purchases directly from the administrator, who will subtract the

amount due from the card. Another example: if a card holder comes to complain about a purchase made, for which an amount was subtracted from the card, whereas the purchased product was faulty or not delivered, the administrator can increase the balance on the card by the same amount. Also, the administrator can increase or decrease the counters of the tokens on the card, for example if he wants to grant a specific request of a lecturer to make more free copies for his classes.

The tabs of the card service screen
The card service screen has the tabs: 'Balance' and 'Tokens'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a card can be viewed or edited.
You will use the tab 'Balance' to edit the balance on a card or the period of validity of the card (§3.3.1). You will use the tab 'Tokens' to edit the counters of the tokens on a card (§3.3.2).

3.3.1 Editing card balance or period of validity

The tab 'Balance' shows the following fields containing data both from the card record of the card in the PC card reader and from the card holder record of the card holder to which that card belongs:
1) Card number: the card number of the card.
2) First name: the first name of the card holder to which the card belongs.
3) Last name: the last name of the card holder to which the card belongs.
4) ID code: the employee code of the card holder to which the card belongs.
5) External card number: the external card number of the card.
6) User group: the user group to which the card holder of the card belongs.
7) Cost centre: the cost centre to which the card holder of the card belongs.
8) Last seen balance: This field shows the balance on the card according to the data in the database at the time the card was inserted (§3.1.1).
9) Start date: date on which the period of validity of the card starts. By editing this field one changes the period of validity of the card.
10) End date: date on which the period of validity of the card ends. By editing this field one changes the period of validity of the card.
11) PIN code: code that the card holder might be asked to enter on certain reload terminals e.g. to reload from their payroll.
12) Current balance: The balance which is read from the card when the action button Read of the card service screen is used.
13) Adjustment: here you enter the amount to be added or distracted from the balance on the card. A negative amount will be distracted. If you choose to enter the amount of the new balance in the field 'New balance', rather than the amount of the adjustment, this field will be filled in automatically when you use the action button Calculate. It will show the amount that will be added to or subtracted from the current balance to reach the amount filled in for the new balance.
14) New balance: here you enter the amount that you wish the new balance on the card to be. If you choose to enter the amount of the adjustment to the current balance in the field 'Adjustment', rather than the amount of the new balance, this field will be filled in automatically when you use the action button Calculate. It will show the

amount of the new balance after the amount filled in for the adjustment has been added to or subtracted from the current balance.

The tab 'Balance' also has two action buttons:

1) Use ->: When you rewrite an existing card, for instance because the old card is broken, this action button is enables you to transfer the last known balance of the old card, i.e. the value of the field 'Last seen balance' to the new card. This is only possible if the new card has the same card number and issue number as the old card. You must then first write the new card from the cards data screen with the action button Write (see §3.1.3.4). The balance of the new card will be set to the start balance of the user group (usually £0.00), but the field 'Last seen balance' will retain the value of the old card. (Note: after writing the card from the card data screen you must **not** read the card from the card data screen, otherwise the field 'Last seen balance' will be adapted and it will no longer be possible to retrieve the old balance of the card and transfer it to the new card). After writing the card you must read the card in the card service screen, then click the action button Use ->, which copies the value of the field 'Last seen balance' to the field 'New balance', and then write the card. See below for step by step instructions. Note: you must take into consideration that the field 'Last seen balance' contains the value the card had after the last transaction of that card collected from the terminals. If the old card has been used at a terminal from which the data has not yet been collected, the field does not reflect the actual balance of the card and you risk transferring an amount larger than the actual balance. We recommend collecting data from all the terminals before writing the new card.

2) Calculate: fills in one of the fields 'Adjustment' and 'New balance' in such a way that 'New balance' is equal to the value of 'Current balance' plus 'Adjustment'.

All the fields are read-only fields, except the fields 'Adjustment' and 'New balance', which are used to edit the balance on the card, and the fields 'Start date' and 'End date', which are used to edit the period of validity of the card.

How to edit the balance or the period of validity of a card in the PC card reader from the card service screen:

1. Choose menu **Cards**.
2. Choose **Card Service.** You will see the card service screen, the tab 'Balance' will be active (Figure 3-39).
3. Place the card, of which you want to edit the balance or the period of validity, in or on the PC card reader.
4. Click Read. The data that is read from the card and the related data from the database will become visible on the screen in the fields listed above. The cursor will be in the field 'Adjustment'. If the card is PIM-blocked (see §3.1.2.5) this will be indicated and unfinished PIM jobs must first be processed and the card unblocked before you can continue.
5. If you do not want to edit the balance on the card, go to step 8. If you wish to add or subtract a specific amount to/from the balance on the card, type that amount in the field 'Adjustment', and then go on to step 7. An amount to be subtracted must be filled in as a negative amount (e.g. **'-3,7'**). If you want to write the value of 'Last seen balance' to the card (see explanation above), click Use -> and go to step 8.

Figure 3-39 The tab 'Balance' of the card service screen

6. If you wish to specify directly the amount of the new balance, double-click in the field 'New balance' and type the desired amount.

7. Click Calculate. If you have filled in the field 'Adjustment' the corresponding value of the field 'New balance' will be calculated and filled in on the screen. If you have filled in the field 'New balance' the corresponding value of the field 'Adjustment' will be calculated and filled in on the screen.

8. To edit the start date of the period of validity of the card, click in the field 'Start date' and enter the desired date.

9. If you wish to edit the end date of the period of validity of the card, click in the field 'End date' and enter the desired date.

10. Click Write. You will see the message 'Write card: [card number]?'.

11. Click Yes. You will see the message 'Print receipt?'.

12. Click Yes to print a receipt, or on No. The edited data will be written to the card. You will see the message 'Card is written'.

13. If you wish to double check that the edits to the data on the card have been effected, click Read again. The data that is read from the card and the related data from the database will become visible on the screen, and you can verify that the data on the card has been edited as specified in steps 5 through 12.

14. Repeat steps 3 through 13 to edit the data on another card, or leave the card service screen.

3.3.2 Editing the counters of the tokens on a card

The tab 'Tokens' of the card service screen shows the following fields for each token-position on the card in the PC card reader (how many token-positions are on each card is defined in

the field 'Number of tokens' of the site record (§8.1)):

1) Token (on card): the number of the token on that position as it is read from the card in the PC card reader.
2) Counter: the present value of the counter for that token as it is read from the card in the PC card reader.
3) New: here you enter the value you want to assign to the counter of that token. The default value for this field is the value of the field 'Start preset' of the right that token represents (§5.4.1).
4) <-Preset: this contains the value of the field 'Discount preset value' or 'Subsidy amount' or 'Penalty preset value' of the right that token represents (§5.4.1), depending on the type of right. You can assign the value of this field to the field 'New'.
5) Right on card: the right that, in the database, belongs to the token number in the field under point 1), so to the token number that was read from the card.
6) Last preset: the date and time the value of the counter of that token was last changed, whether this change took place at a terminal when the right was used by the card holder (for instance by getting a free cup of coffee) or in FacilityPro Manager through the card service screen.
7) Token (in database): the number of the token that is supposed to be on that token-position on cards of card holders of this user group and cost centre according to the database.
8) Right in database: the right that, in the database, belongs to the token number in the field under point 7), so to the token number that was read from the database.

All of these fields are read-only fields, except the fields 'New:' and '<-Preset' which you can use to edit the values of the counters of the tokens on the card.

How to edit the counters of the tokens of a card in the PC card reader from the card service screen:

1. Choose menu **Cards**.
2. Choose **Card Service.**
3. Click the tab 'Tokens'. You will see the tab 'Tokens' (Figure 3-40)
4. Place the card of which you want to edit the counters of the tokens in or on the PC card reader.
5. Click Read. The data that is read from the card and the related data from the database will become visible on the screen.
6. If you wish to reset the value of the counter for one of the tokens on that card to the value of the field in the column '<-Preset', double-click in the column '<-Preset' for that token. You will see that the value of the field in the column 'New' has been given the value of the field in the column '<-Preset'. Go to step 8.
7. If you wish to specify directly the value of the counter of one of the tokens, click in the field in the column 'New' for that token and type the desired value.
8. Repeat steps 6 or 7 for each token of which you wish to edit the counter.
9. Click Write. You will see the message 'Write card: [card number]?'.
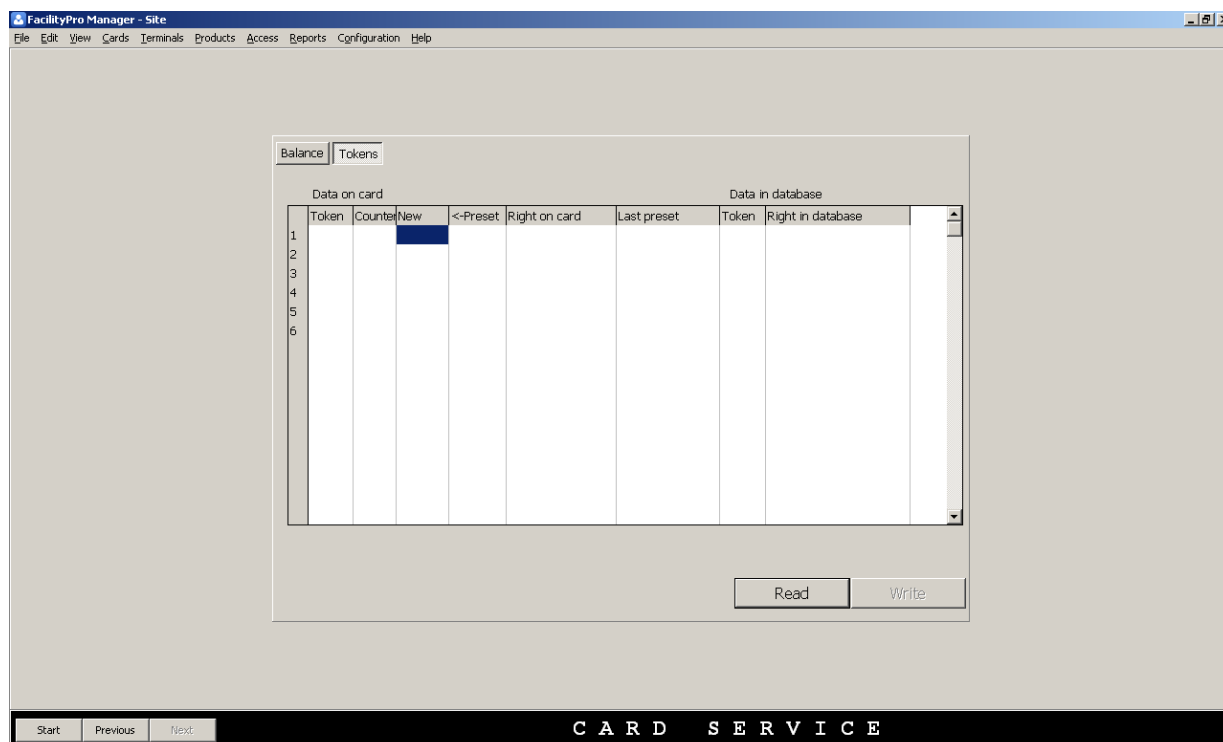
Figure 3-40 The tab 'Tokens' of the card service screen

10. Click Yes. You will see the message 'Print receipt?'.
11. Click Yes to print a receipt, or on No. The new values for the counters of the tokens on the card will be written to the card. You will see the message 'Card is written'.
12. If you wish to double check that the counters of the tokens on the card have the desired values, click Read again. The data that is read from the card and the related data from the database will become visible on the screen and you can verify that the counters of the tokens on the card have been edited as specified in steps 6 through 11. The values of the fields in the column 'Counter' should now be the values of the fields of the column 'New' before you executed step 9.
13. Repeat steps 3 through 12 to edit the counters of the tokens on another card, or leave the card service screen.

3.4 User groups

A user group is a group of card holders with the same privileges. Rights (§5.4) can be assigned to user groups. All the card holders of a user group, and therefore the cards held by these card holders, have the same rights. An access group (§6.2) can be assigned to user groups. All the cards subsequently created for this user group will then have that access group assigned to them. In the example site of this user manual, a fictitious university, there are five different user groups:

1) PERS-LA, the lecturers and administrative personnel, who have the right to free coffee, to free copies, to use the parking garage and who are the only ones to be allowed to use the photocopier outside the staff room

2) PERS-OTHER, other personnel, who have the right to free coffee and to use the parking garage
3) STUDENT, the students
4) GUEST, normal guests, who must pay a higher price for most products than students and personnel
5) OFFICIAL, official guests, who receive products for free, for which a representation card is used

On the user groups data screen, the record list is a list of all the user groups. From this screen you can view, create, edit, and delete user groups.

The tabs of the user groups data screen

The user groups data screen has the tabs: 'Settings', 'Rights', 'Frames' and 'Access'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a user group can be viewed or edited.

Above the tabs, at the top of the data entry area of the user groups data screen are two fields: 'User group' and 'User group ID'. These fields are therefore visible whichever is the active tab.

The tab 'Settings' contains the basic data of a user group, and is discussed in §3.4.1.

You will use the tab 'Rights' to assign rights to a user group (§5.4), or to take away rights previously assigned to a user group. Instructions on how to do this can be found in §3.4.2.1. Using the action button Tokens of the tab 'Rights' you can examine or change which token numbers will be written on cards of this user group and which rights they represent. Instructions on how to do this can be found in §3.4.2.1.1.

You will only use the tab 'Frames' to assign one or more frame types to a user group so that certain information will be written in the frames of all the cards held by card holders of that user group. Instructions on how to do this can be found in §3.4.2.2.

You will use the tab 'Access' to assign an access group to a user group (§6.2), or to take away an access group previously assigned to a user group. Instructions on how to do this can be found in §3.4.2.3. When an access group is assigned to a user group all <u>subsequently</u> created cards are automatically assigned this access group. The access group that is assigned to a card can always be edited from the tab 'Access' of the cards data screen.

3.4.1 Creating a user group in the database

The fields of the data entry area of the user groups data screen (when the tab 'Settings' is active) are listed and explained below. The fields marked [*] must be assigned a value:

1) User group[*]: the name of the user group, maximum 30 characters. We recommend using short names.
2) User group ID: the number of the user group (this is a read-only field).
3) Default cost centre: the cost centre to which every new card or card holder of this user group will belong by default (i.e. if no other cost centre is entered). If this field is left empty, you will have to specify the cost centre for each card or card holder of this user group.
4) Validity in years: (default value 10)

5) Start date: before this date, terminals will not accept cards belonging to card holders from this user group.
6) End date: after this date, terminals will not accept cards belonging to card holders from this user group.
7) Start balance: an amount that is automatically credited to new cards for this user group.
8) Max. balance: the maximum amount that may be on the card. Entering a value in this field reduces the risk in case of loss or theft of the card. If this field is filled in it overrules the value of the field with the same name on the site options data screen.

WARNING: If the field 'Start balance' has a value greater than zero, 'losing' cards could become very interesting for card holders, as each new card is credited an amount of money. The administrator should change the balance to zero before writing a new card for a card holder who has lost his card, or he should set a purchase price that a card holder who has lost his card must pay for a new card.

To create a user group, fill in the fields that you wish to assign a value. Instructions on how to do this are given below. You might also want to assign certain rights to this user group (§3.4.2.1), write specific information about this user group in the frames (§3.4.2.2) and/or assign certain zones to this user group (§3.4.2.3).

How to create a user group:

1. Choose menu **Cards**.
2. Choose **User groups.** You will see the user groups data screen (Figure 3-41). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Edit the field 'User group' and any other fields of the data entry area that you wish to fill in or change (§2.1.2.4).
5. Click Apply.
6. Click OK. The new user group will be saved. The record list will include the name of this new user group.
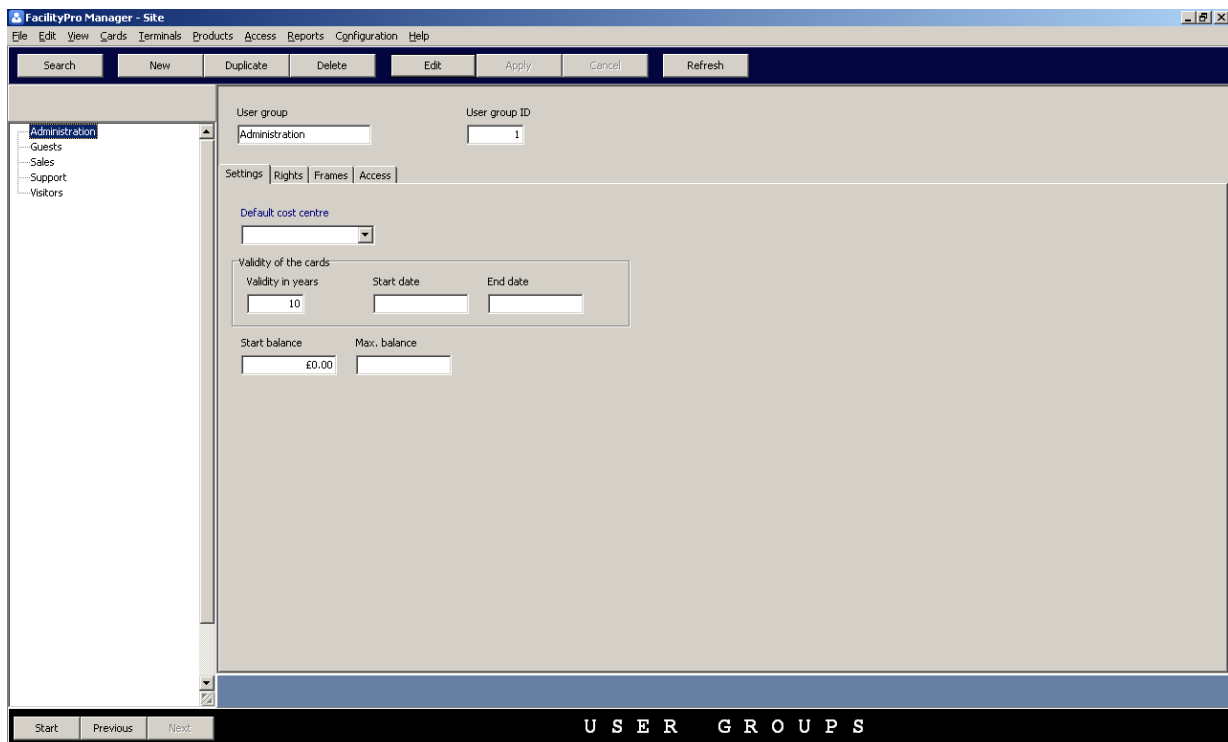
Figure 3-41 The tab 'Settings' of the user groups data screen

3.4.2   The tabs of the user groups data screen

Apart from the tab 'Settings' of the user groups data screen, there are three other tabs, the use of which is described in the following paragraphs.

3.4.2.1   The tab 'Rights'

You will assign a right (§5.4) to a user group by adding it to the list of rights assigned to that user group on the tab 'Rights' of the user groups data screen. The assigned rights will be linked to the tokens of that user group in the database. The tokens are written on the cards of that user group. Which rights are linked to the tokens is communicated to the terminals as a part of the configuration of the terminal. When a card is inserted into a terminal, the terminal will read the tokens on the card and know which products to provide to the card holder, at which price and under which conditions.

Note: When a new user group is created, empty or 'dummy' tokens (as many as a card can contain, §8.1.1) are saved in the database for that user group. These tokens will be written on all cards of that user group. You cannot assign more rights to a user group than the number of tokens on the cards. When you assign a right to a user group, that right is connected to a token of that user group. At that time, cards pertaining to that user group might already be in use. A token on a card that initially did not entitle the card holder to any specific right, now does entitle the card holder to a specific right. Therefore, when you change the rights of a user group (whether you assign a new right, or withdraw previous rights), you should inform the card holders of that user group that their rights have been changed.

How to assign a right to a user group:

Note: To assign a right to a user group, the right must exist in the database.

Note: When you assign a right to a user group, keep in mind that the list of assigned rights is prioritised. The topmost right has the highest priority. In view of this you might want to rearrange the order of the assigned rights when you assign a new right to a user group. You will do this by taking away previously assigned rights, re-assigning them to a different position on the list, and assigning a new right to the position that has become vacant.

1. Choose menu **Cards**.
2. Choose **User groups**.
3. Select the user group to which you want to assign a right.
4. Click the tab 'Rights'. You will see the tab 'Rights' (Figure 3-42). On the right you will see a list of all the rights known to FacilityPro Manager. On the left you will see a numbered list (which might be empty) of the rights that have been assigned to this user group.
5. Click Edit.
6. In the right list, click the right you want to assign to the user group.
7. In the left list, click the position in the list of assigned rights to which you want to assign the right selected in step 6. This position must be empty.
8. Click the arrow <+ to assign the selected right. The newly assigned right will appear in the left list in the selected position.
9. Repeat steps 6 through 8 for each right you want to assign.
10. Click Apply.
11. Click OK.
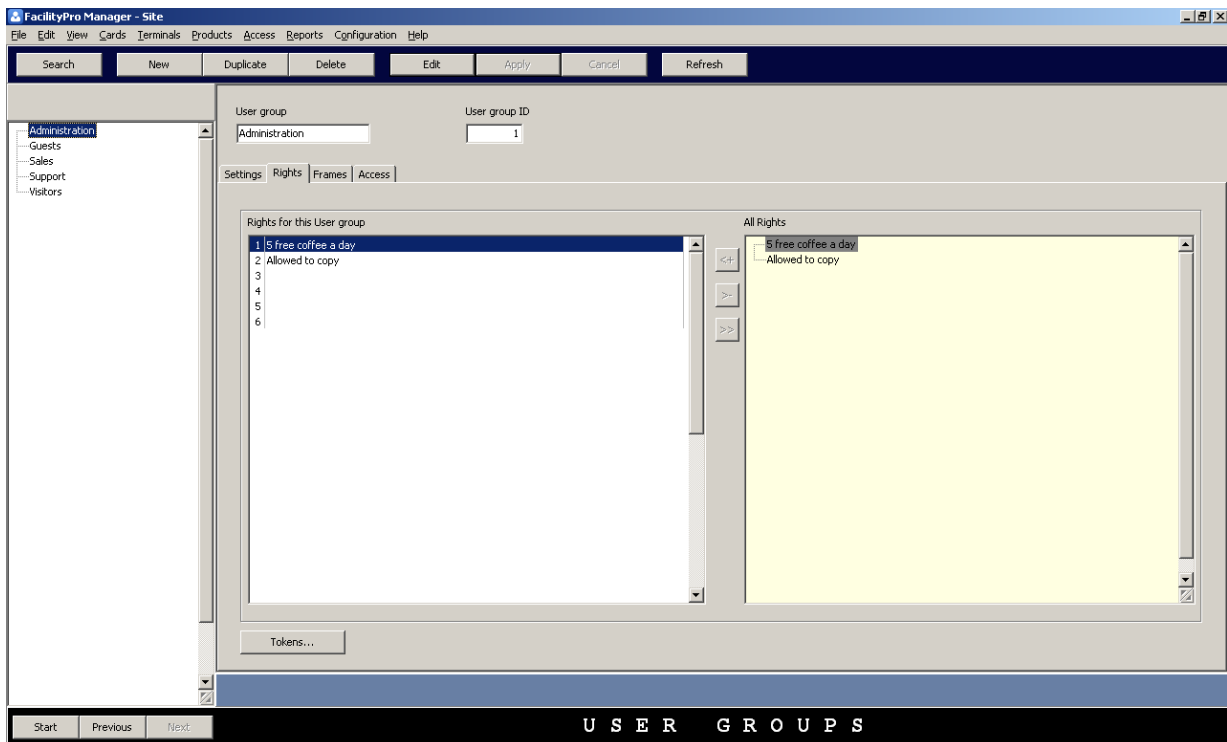
Figure 3-42 The tab 'Rights' of the user groups data screen

How to take away previously assigned rights from a user group:

1. Choose menu **Cards**.
2. Choose **User groups**.
3. Select the user group from which you want to take away a right.
4. Click the tab 'Rights'. You will see the tab 'Rights' (Figure 3-42). On the right you will see a list of all the rights known to FacilityPro Manager. On the left you will see a numbered list of the rights that have been assigned specifically to this user group.
5. Click Edit.
6. To take away all previously assigned rights from this user group, click the arrow >> . The left list will then be empty. Then go on to step 10.
7. In the left list, click the right you want to take away from the user group.
8. Click the arrow >- to take away the right. The selected right will disappear from the left list.
9. Repeat steps 7 through 8 for each right you want to take away.
10. Click Apply.
11. Click OK.

Note: the advanced user may prefer to make changes to the rights connected to the tokens using the token editor, which can be activated with the action button Tokens (§3.4.2.1.1).

3.4.2.1.1 The action button Tokens

This action button will only be used by the advanced user in very specific cases.

The action button Tokens on the tab 'Rights' of the user group data screen offers you the possibility to view and edit the contents of the tokens table of the database. It shows more detailed information, such as the numbers of the tokens, than the tab 'Rights' of the user group data screen. Token numbers are normally assigned by FacilityPro Manager to each user group – cost centre combination, which we call a card group. Normally, they will be no need to edit these token numbers. But if, for instance, you are introducing FacilityPro Manager at a site, where another electronic payment system was previously used, and you want the cards of the old system to be carried over to the new system, you might need to edit the token numbers that FacilityPro Manager has assigned, so that the token numbers on these existing cards and those in the database will match.

When you activate the action button Tokens, the tokens editor screen appears (Figure 3-43).

Figure 3-43 The tokens editor screen

This screen shows you which token number has been assigned to each token position on the cards of a card group (a card group is a user group – cost centre combination), and which right (if any) is linked to that token number in the database (how many token positions are on the cards is defined in the field 'Number of tokens' of the site record (§8.1.1)).

You can change the card group for which the information is presented, by clicking in another Cost centre field in the right column on the screen. You can only see the information for the card groups of the user group that was selected when you activated the token editor. To see the information for card groups of other user groups, you must leave the token editor, select the desired user group, and activate the token editor again with the action button Tokens.

On the tokens editor screen you can edit the fields in the columns on the left of the screen. We advise not to do this, as changes you effect here will not be visible from the data screens of FacilityPro Manager. Also, changes effected subsequently from the data screens of

FacilityPro Manager might undo changes you have implemented from the tokens editor. This will lead to a lack of transparency of the system data.

How to change the token numbers assigned to the cards of a card group:

1. Choose menu **Cards**.
2. Choose **User groups**.
3. Select the user group to which the card group for which you want to edit the token numbers belongs.
4. Click Tokens.
5. In the column on the right side of the screen, click on the 'Cost centre' of the card group for which you want to change the token numbers.
6. Double-click in the field 'New token' and type the token number you want to assign to the first token position of the cards of the card group visible on the screen. The token number you assign here must be such that that number and enough consecutive numbers to accommodate the number of token positions on the cards, are not already assigned to any token position of any card group. Otherwise, you will get an error message 'Record already exists. TOKEN: Key violation.' after executing step 8.
7. Click Change tokens. FacilityPro Manager will ask you to confirm that you want to change the token numbers assigned to that card group.
8. Click Yes. The column 'Token' on the left side of the Tokens editor screen will show the newly assigned token numbers.
9. Repeat steps 5 through 8 to change the token numbers assigned to other card groups of the same user group.
10. Click OK to leave the tokens editor screen.
11. Repeat steps 3 through 10 to change the token numbers assigned to card groups of other user groups.

3.4.2.2 The tab 'Frames'

As the functionality offered by FacilityPro Manager for frames is not used on most sites, the menu frame types, and the tab 'Frames' on the cards and user groups data screens is invisible by default. To use frames you must change the level of authorisation for frame types for the administrator group that you belong to.

A frame is a memory-space on a card that can be used to store any information that the administrator would like to have stored on the card. This could for example be the user group of the card holder, the card holder's blood type, the number of the site to which the card belongs, other text, a membership number through which the card can be linked to other systems (e.g. library), or other medical information. Per user group we define how many frames there will be on the cards of that user group. To determine the data that will be written to a frame, a frame type is assigned to that frame.
Usually a frame type is assigned to a frame of a user group, following the instructions below. All the cards of that user group then have the same information in that frame. This provides enough functionality for most sites. It is also possible to assign a frame type to a frame of a specific card, and add specific data to be saved in that frame of that card (§3.1.2.1). That frame type must have the value 'Cards' in the field 'Table' and may not have a value in the

field 'Field' (§8.6.1) and must first have been assigned to the user group of the card to which it is assigned, following the instructions below.

How to assign frame types to a user group:

Note: The number of available frames on a card depends on the type of card used (Mifare cards accept only 0 or 2 frames, Legic cards also accept 1 frame). Double-check the maximum number of frames before changing the field 'Frames' of a user group.

Note: To assign a frame type to a user group, the frame type must exist in the database.

1. Choose menu **Cards**.
2. Choose **User groups**.
3. Select the user group to which you want to assign one or more frame types.
4. Click Edit.
5. Click the tab 'Frames'. You will see the tab 'Frames' (Figure 3-44). At the bottom of the screen you will see, in the field 'Frames', the number of frames on the cards of this user group. On the right you will see a list of all frame types known to FacilityPro Manager. On the left you will see a numbered list (which might be empty) of frame types previously assigned to this user group. This list will have one position for each frame on the cards, the number in the list corresponding to the number of the frame on the card.
6. If the number of frames available is not sufficient for the amount of frame types you want to assign, double-click in the field 'Frames', type the desired value (remark that the list on the left will not be re-written with the new number of positions until you click <+ in step 9). Be aware that you thereby change the number of frames on all cards of this user group. Never enter a number larger than the number of frames that can be written to the cards used at the site.
7. In the left list, select the frame to which you want to assign a frame type.
8. In the right list, select the frame type which contains the information that you want to be written to the selected frame.
9. Click the arrow <+ to add the selected frame type to the list of frame types that will be written to the cards of this user group.
10. To add specific data at the user group level to the frame type you have just added (this is only possible with frame types which have value 'User groups' in field 'Table' and no data in field 'Field', §8.6.1), click in the field 'Data'. You will see a dialog screen with the message 'Enter data:'. Type the data that you want to be saved in the corresponding frame of the cards of this user group and click OK.
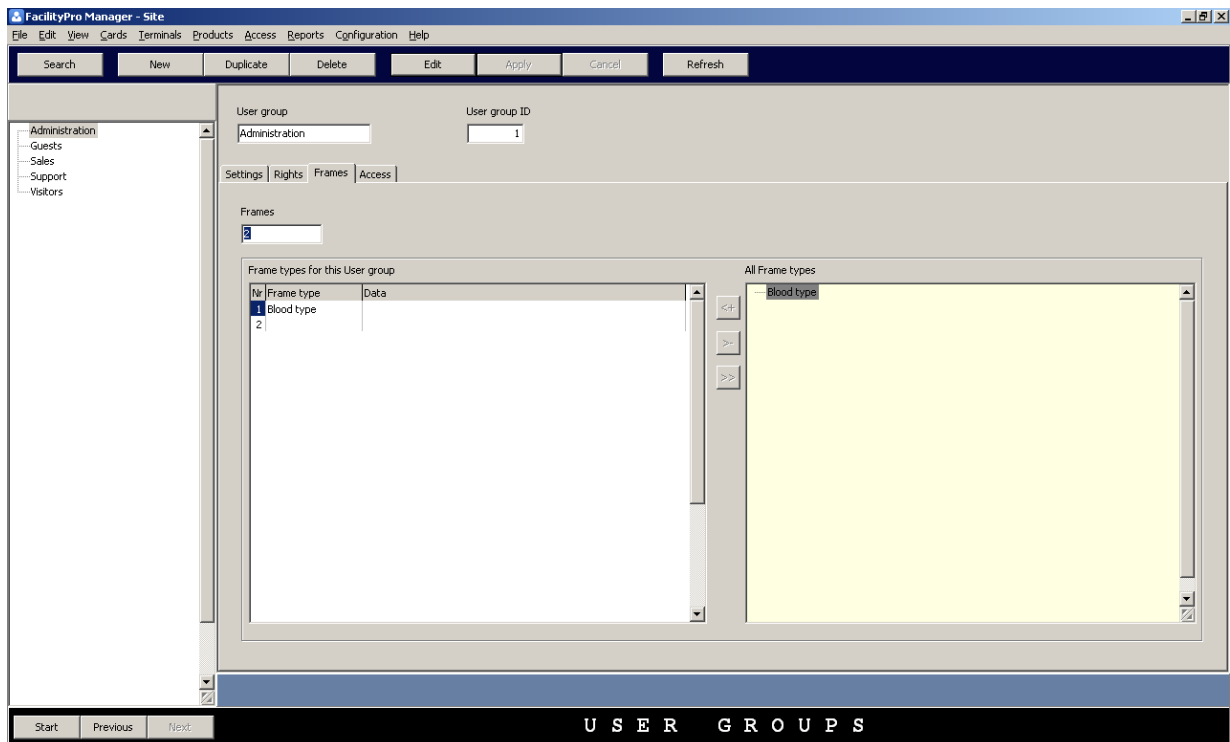
Figure 3-44 The tab 'Frames' of the user groups data screen

11. Repeat steps 7 through 10 to assign more frame types to this user group.
12. To delete a frame type from the left list, select the frame type and then click the arrow >- to delete it.
13. To delete all frame types from the left list, click the arrow >> to delete them.
14. Click Apply.
15. Click OK. The edited user group will be saved.

3.4.2.3   The tab 'Access'

On the tab 'Access' of the user groups data screen you can define an access group (§6.2) that you want to assign to the selected user group. When you assign an access group to a user group, the card numbers of all subsequently created cards will be added to the access lists of all the access terminals of all the zones of that access group together with the timetables defined in the access group (if any). You can also use an action button to change the access group of all existing cards in the user group to the currently assigned access group, thereby adding the corresponding card numbers and timetables to the access lists. These access lists are sent to the access terminals as a part of their configuration. When a card is presented at an access terminal, the terminal will check the card number of the card against its access list and the actual time against the appropriate timetable to know whether to grant access to the card holder.

You can assign an access group to a user group following the instructions given below. Sometimes an access group might have been assigned to a user group, but you now want to exclude the cards of that user group from gaining access at the access terminals of the zones of that access group. In that case you must take away a previously assigned access group from that user group following the instructions given below.

You can manually assign an access group to an individual card on the tab 'Access' of the cards data screen (§3.1.2.3).

When you change the access group that has been assigned to a user group, the access group that has been assigned to cards already existing in that user group <u>does not change accordingly</u>, and you might therefore want to use the action button <mark>Put cards in this access group</mark>.

How to assign an access group to a user group or remove a previously assigned access group:

Note: To assign an access group to a user group, the zone must exist in the database.

1. Choose menu **Cards**.
2. Choose **User groups**.
3. Select the user group you want to assign an access group to or remove an access group from.
4. Click the tab 'Access'. You will see the tab 'Access' (Figure 3-45). You will see the field 'Default access group', which might be empty or contain a previously assigned access group.
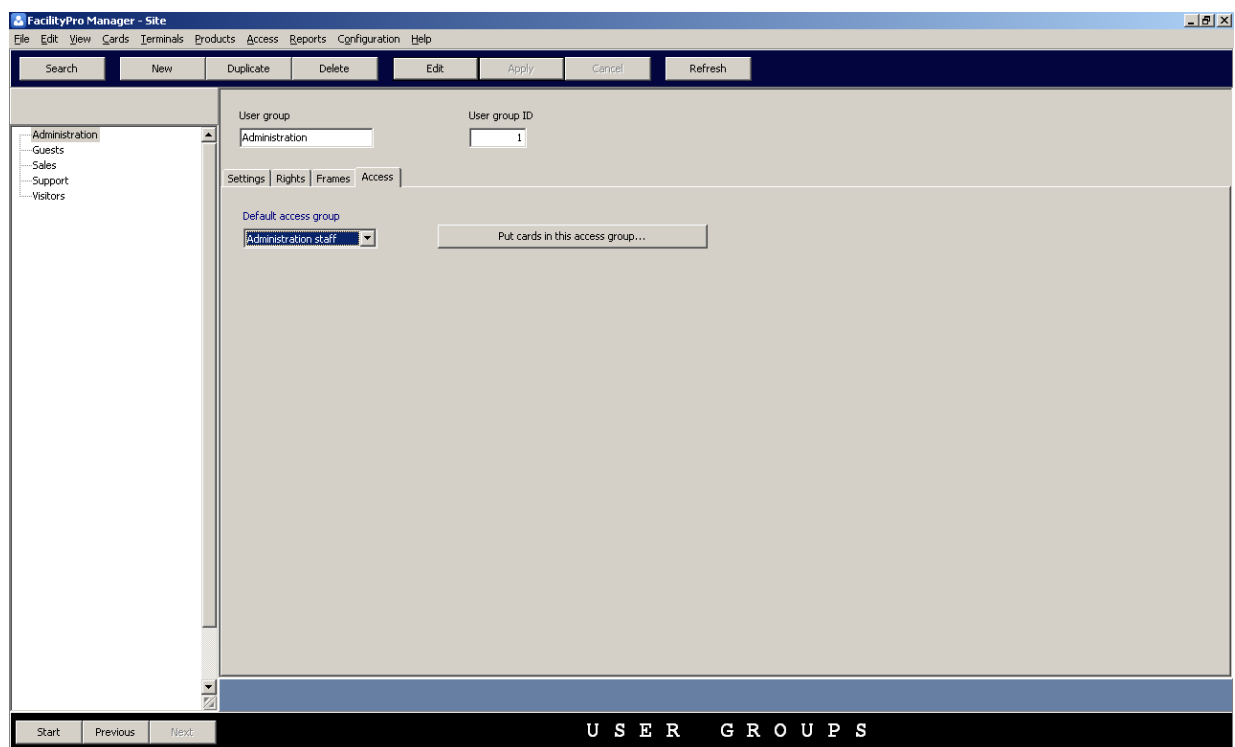
Figure 3-45 The tab 'Access' of the user groups data screen

5. To remove an access group double-click in the field 'Default access group' to select it and then press **<Ctrl+Del>** to delete it.
6. To assign an access group click the arrow next to the field 'Default access group'. You will see a list of existing access groups. Select the access group you want to assign to this user group.

7. If you have removed or edited the access group assigned to this user group and you want the change to be made to all existing cards of this user group press the action button Put cards in this access group. Please note that if any cards of the user group already had access groups assigned to them, these will be replaced by the newly defined access group (or removed if you have deleted the value in the field 'Default access group'). Then click OK twice.
8. Click Apply.
9. Click OK. The edited user group will be saved.

3.5 Cost centres

Cost centres are used to subdivide the card holders for budgeting purposes, making it possible to link up to financial administration systems or automated billing systems of third parties. FacilityPro Manager can produce standard reports on the transactions effected per cost centre and on the turnover data per cost centre.

In the example site of this user manual, a fictitious university, we have defined six cost centres: language innovation (LI), literature (LIT), phonetics (PHO), didactics (DID), grammar (GRA) and general (GEN).

On the cost centres data screen, the record list is a list of all the cost centres. From this screen you can view, create, edit, and delete cost centres.

3.5.1 Creating a cost centre in the database

The data entry area of the cost centres data screen has only two fields: the name of the selected cost centre and a note field. To create a cost centre, you will have to fill in at least the name field.

How to create a cost centre:

1. Choose menu **Cards**.
2. Choose **Cost centres**. You will see the cost centres data screen (Figure 3-46).
3. Click New.
4. Fill in the field 'Cost centre' and the field 'Note' if you wish (§2.1.2.4).
5. Click Apply.
6. Click OK. The new cost centre will be saved. The record list will include the name of this new cost centre.
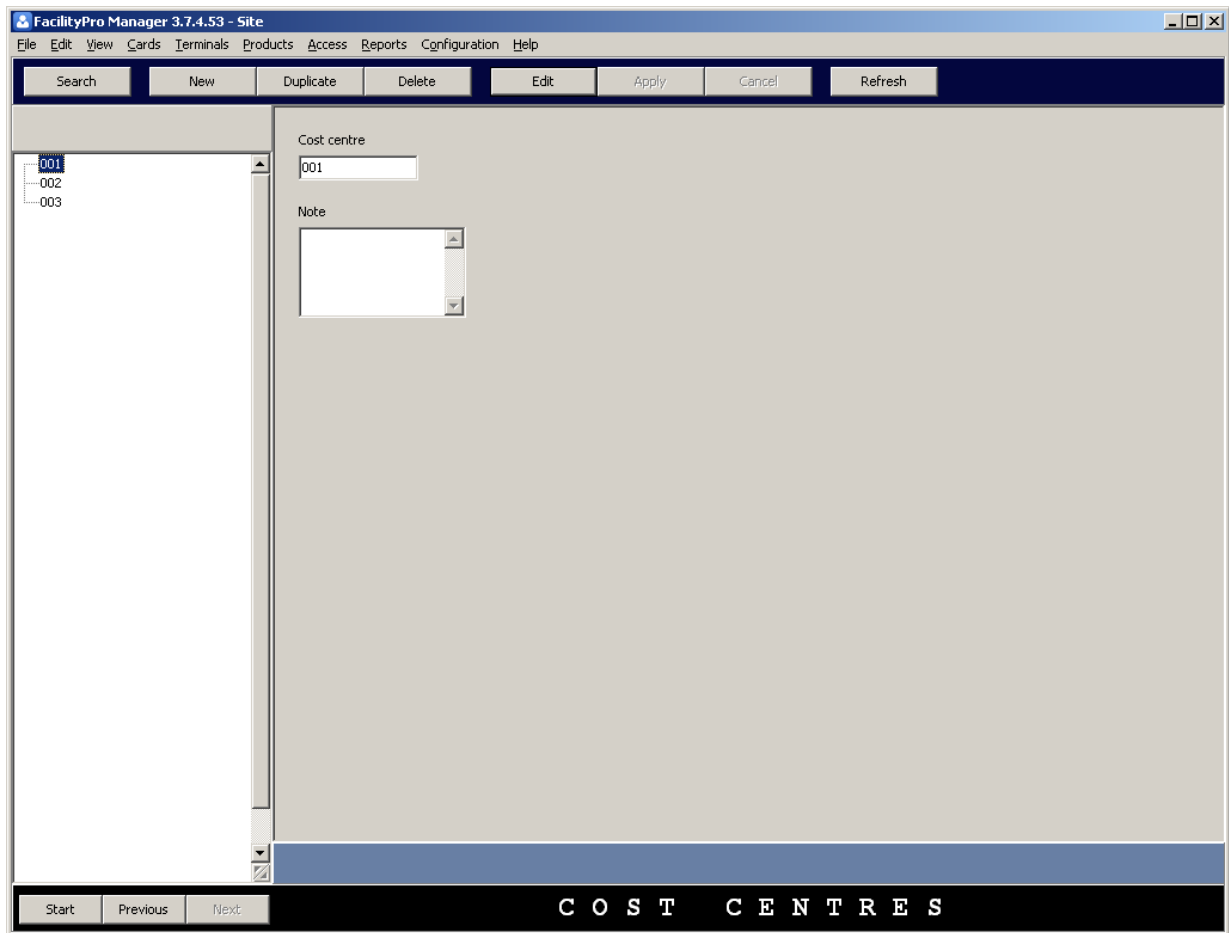
Figure 3-46 The cost centres data screen

4 Terminals

A terminal consists of a Magnabox and a card reader, and is connected to a dispenser on the site. A card holder can insert his card into the card reader to obtain products. The Magnabox reads the information on the card and instructs the dispenser to render its products to the card holder in accordance with the data on the card. The terminal saves all relevant data on transactions effected in the Magnabox. Because the memory space in the Magnabox is limited (it can store only 500 transactions), the terminal is polled at regular intervals, whereby the transaction data is collected from the terminal by the collector or a handheld, and stored in the database. A terminal also receives data from FacilityPro Manager (through the collector or the handheld) during the polling, such as changes in the prices of the products rendered by the dispenser, the rights that have been assigned to user groups, and an update of the hotlist. This data is called the configuration of the terminal.

The main menu 'Terminals' of FacilityPro Manager has menu options which open the data screens representing the five tables in the database that contain information related to terminals: terminals, terminal groups, machine types, locations and machine suppliers.

4.1 Terminals

On the terminals data screen, the record list is a list of all the terminals. From this screen you can view, create, edit, and delete terminals.

The tabs of the terminals data screen
The terminals data screen has the tabs: 'Settings', 'Products', 'Access', 'Status' and 'Other'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a terminal can be viewed or edited. Above the tabs, at the top of the data entry area of the terminals data screen are three fields: 'Terminal name', 'Machine type' and 'Max. products'. These fields are therefore visible whichever is the active tab.
The tab 'Settings' contains the basic data of a terminal, and is discussed in §4.1.1.
You will use the tab 'Products' to define which product can be dispensed by each of the dispenser slots of the dispenser at a terminal. Instructions on how to do this can be found in §4.1.2.1.
The tab 'Access' will only be visible if the selected terminal is an access terminal. You will use this tab to see which zone the terminal belongs to and to define a period during which the access terminal is 'unlocked', i.e. anyone can gain access through the dispenser at that access terminal without a card. Instructions on how to do this can be found in §4.1.2.2.
You will use the tab 'Status' for instance to find out when the terminal data was last collected from the terminal, which software is in the terminal, or whether there is an active network connection to the terminal. A detailed description of the fields on the tab 'Status' and instructions on how to work with this tab can be found in § 4.1.2.3.
The tab 'Other' has infrequently used fields, including one in which to define which text should show on the display of the terminal when it is not in use. A detailed description of the

fields on the tab 'Other' and instructions on how to work with this tab can be found in §4.1.2.4.

4.1.1 Creating a terminal in the database

The fields of the data entry area of the terminals data screen (when the tab 'Settings' is active) are listed and explained below. The fields marked * must be assigned a value:

1) Terminal name*: the name of the terminal.
2) Machine type*: the machine type of the terminal (§4.3).
3) Max. products: specifies how many different products the dispenser at this terminal can contain. The value depends on the number of service slots of the dispenser. This field will automatically contain the value of the field 'Max. products' of the machine type of this terminal (§4.3), but can be edited if desired.
4) Magnabox serial number*: the serial number of the Magnabox of the terminal. This field is case sensitive and must be in lowercase characters only.
5) Terminal group*: the terminal group to which the terminal belongs.
6) Location*: the location of the terminal on the site.
7) Sublocation 1: an extra field to allow the terminals to be grouped based on physical location and reported on per group.
8) Sublocation 2: an extra field to allow the terminals to be grouped based on physical location and reported on per group.
9) Connection: the kind of connection between the terminal and FacilityPro Manager. This could be:
   a) Network – data will be interchanged between the terminal and FacilityPro Manager through a network.
   b) USB – data will be interchanged between the terminal and FacilityPro Manager by connecting a USB stick to the terminal.
   c) Handheld - data will be interchanged between the terminal and FacilityPro Manager by connecting a handheld to the terminal.
10) IP-address: this field is only relevant when the value of the field 'Connection' (see above) is 'Network'. It is the name of the terminal within the network. The collector uses this name as the address for the terminal, when it seeks connection with the terminal during a poll round. This name is usually a TCP/IP-address.
11) Dial-up connection: if connection to the terminal will be made through a dial-up connection, this dial-up connection should be defined in Windows, added to the dial-up connections known to FacilityPro Manager (§8.4.1.1) and the name of the dial-up connection must be filled in here.
12) Phone: if connection to the terminal will be made through a telephonic network, whether GSM/mobile or PSTN/analog, the correct telephone number must be entered here.
13) Descriptor version: the version of the data files of the Magnabox. This field will have a value similar to 'desvxxxx' (for Multi Card Smart terminals 'fcdvxxxx'). This field will be filled in automatically the first time a connection with the terminal is established through the network. The files containing the descriptor (format of the data in the terminals) for this descriptor version will be downloaded from the terminal to the workstation, and the descriptor table of the database will be updated to point to the correct files. If the terminal is not connected to FacilityPro Manager through a network, the field 'Descriptor

version' must be entered manually. The files containing the descriptor (format of the data in the terminals) for each descriptor version will normally have been put on the workstation during installation (in the folder c:\FacilityPro\bin). If this is not the case, they must be manually downloaded from the terminal to the folder c:\FacilityPro\bin. FacilityPro Manager will then update the descriptor table to point to the correct files automatically. Refer to the dealer of your terminal for the descriptor version and more details on the descriptor files.

14) Collector: the name of the workstation that is the collector for this terminal in the case that the type of connection between the terminal and FacilityPro Manager will be through a network (see below). This workstation polls the terminal to get data and sends configuration files to the terminal.

15) Skip this terminal: when this check-box is checked, the terminal is not polled. When the collector executes a poll round the terminal is skipped.

16) Collect transaction data only: when this check-box is checked the collector will not collect the data from the counters of this terminal's Magnabox; only the transaction data will be collected. Consequently, the interim counters will also not be reset. This check-box is sometimes checked for reload terminals, where one might prefer only to collect and reset the counters with a handheld when the reload terminal is emptied, which will be done manually at the location of the terminal.

17) Collect open E-purse transactions alw.: this field will not be visible unless Chipknip cards are accepted on site. If this field is checked, the Chipknip transactions will be collected every time the counters are read from the terminal. If it is not checked, these transactions will only be collected when a minimum amount of Chipknip transactions has taken place or a minimum period has elapsed since the last collection of Chipknip transactions.

18) Right needed to use terminal: this check-box is checked if the dispenser at this terminal may only render products to a card holder with a card that has a token on it, giving the right to use that terminal. One or several rights must be created giving the right to use this terminal (§5.4), and must be assigned to the appropriate user groups (§3.4.2.1). Unless such a right has been created, the check-box will be shown in grey text and cannot be checked. For an access terminal, this check-box will always be shown in grey text and cannot be checked.

19) Products also available without right: when this check-box is checked, a card holder can obtain any of the products of the dispenser, without having a token on the card for it. By default, this check-box is checked. If you un-check it, the products of the dispenser will not be available to anyone unless you create one or more rights to obtain them and assign these rights to one or more user groups. For an access terminal, this check-box will always be shown in grey text and cannot be un-checked.

To create a terminal, fill in the fields that you wish to assign a value. Instructions on how to do this are given below. You might also want to define which product can be dispensed by each of the dispenser slots of the dispenser at the terminal (§4.1.2.1). If the terminal is an access terminal you can define a period during which an access terminal is 'unlocked', i.e. anyone can gain access through the dispenser at that terminal without a card (§4.1.2.2). You can also fill in certain fields on the tab 'Other' (§4.1.2.4).

How to create a terminal:

> *Note: To create a terminal the appropriate terminal group, location and the machine type must exist in the database.*

1. Choose menu **Terminals**.
2. Choose **Terminals**. You will see the terminals data screen (Figure 4-1). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Edit the field 'Terminal', 'Machine type', 'Magnabox serial number' and 'Location' and any other fields of the data entry area that you wish to fill in or change.

Figure 4-1 The tab 'Settings' of the terminals data screen

5. On the tab 'Products', define which products are available at this terminal, by following steps 5 through 13 of §4.1.2.1. You can also define the available products at a later stage by following all the instructions in that paragraph.
6. If the new terminal is an access control terminal, and you want to define a period of free access, during which the entrance (e.g. a door) controlled by that terminal is unlocked and one does not need a card to gain access at that terminal, edit the fields of the tab 'Access' (§4.1.2.2).
7. On the tab 'Other', edit the fields that you wish to change or fill in.

8. Click Apply.
9. Click OK. The new terminal will be saved. The record list will include the name of this new terminal.

4.1.2 The tabs of the terminals data screen

Apart from the tab 'Settings' of the terminals data screen, there are four other tabs, the use of which is described in the following paragraphs.

4.1.2.1 The tab 'Products'

On the tab 'Products' of the terminals data screen you can view and edit which product is available on each of the dispenser slots of the dispenser at a terminal. The tab 'Products' also has the action button Copy products… which is used to copy the data of the tab 'Products' of the selected terminal to all terminals of the same machine type (§4.1.2.1.3).
If terminal profiles are used on your site (the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is checked (§8.1.2.5)), the products available at the terminal will be defined in a terminal profile, and the tab 'Products' of the terminal will have a field 'Terminal profile' where you can define which terminal profile should be used for this terminal. In this case you can view, but not edit, which product is available on each of the dispenser slots of the dispenser at a terminal on the tab 'Products' and the instructions below do not apply.

4.1.2.1.1 Defining which products are available at a terminal

This paragraph applies only to sites where terminal profiles are not used, i.e. the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is not checked (§8.1.2.5). For sites where terminal profiles are used, see §4.1.2.1.2.

How to fill in the products which are available at a terminal:

Note: the products to be filled in must exist in the database.

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Select the terminal for which you want to define which products it provides.
4. Click Edit.
5. Click the tab 'Products'. You will see the tab 'Products' (Figure 4-2). On the right of the tab you will see a list of products known to FacilityPro Manager, grouped by product group. On the left, you will see a list (which might be empty) of products available at the dispenser of this terminal. The default length of this list is equal to the value of the field 'Max. products' of the machine type of the dispenser at this terminal (§4.3). This value can be seen in the field 'Max. products' and can be changed here for this individual terminal. Each item on this list refers to a different service slot of the dispenser. The topmost item on the list is the product available at dispenser slot 1 of the dispenser, etc.

6. If you want to adapt the value of the field 'Max. products' for this individual terminal, double-click in the field 'Max. products' and type the new value. The length of the list of products available at this terminal will only change when you add products to that list in step 10.

7. Select in the list on the left, the position that represents the dispenser slot for which you want to define the available product.

8. In the list on the right, click the plus-sign next to the product group to which the product you want to assign belongs. You will see a list of the products of this product group.

9. Select (still in the list on the right) the product you want to assign to the selected position of the list on the left.
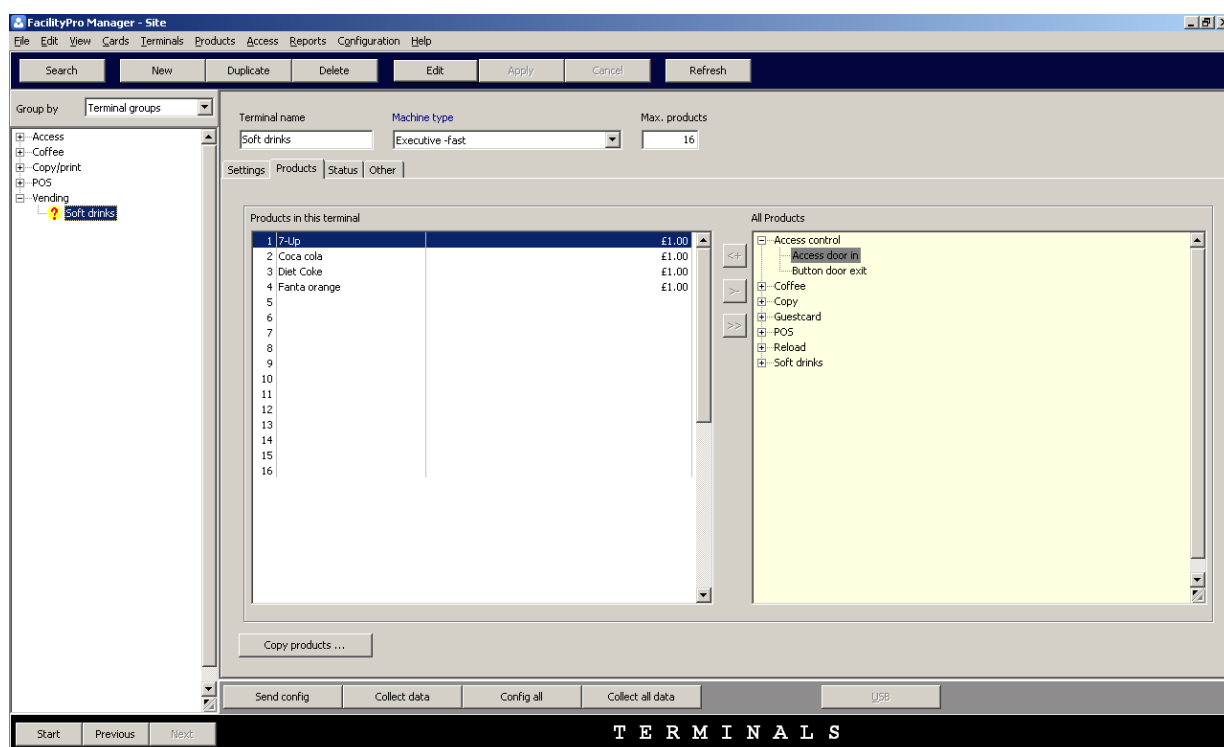
Figure 4-2 The tab 'Products' of the terminal data screen

10. Click the arrow <+ to assign the selected product to the selected position. You have now defined that this product is available at the represented dispenser slot. If you have edited the field 'Max. products' in step 6, the length of the list on the left will now be adapted to reflect the new value of 'Max. products'.

11. Repeat steps 7 through 10 to assign more products. Usually, but not necessarily, you will enter a product for each slot in the list on the left.

12. If you want to delete a product from the list on the left, select the product and click the arrow >- to delete it.

13. If you want to delete all products from the list on the left, click the arrow >> to delete them all.

14. Click Apply.

15. Click OK. The edited terminal will be saved.

4.1.2.1.2 Defining which products are available at a terminal through a terminal profile

This paragraph applies only to sites where terminal profiles are used, i.e. the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is checked (§8.1.2.5).

How to define which products are available at a terminal through a terminal profile:

> *Note: the terminal profile to be filled in must exist in the database.*

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Select the terminal for which you want to define which products it provides.
4. Click Edit.
5. Click the tab 'Products'. You will see the tab 'Products' (Figure 4-3).
6. Click on the drop-down arrow next to the field 'Terminal profile' and select the desired terminal profile.
7. Click Apply.
8. Click OK. The edited terminal will be saved. You will see a list of products available at the dispenser of this terminal. Each item on this list refers to a different service slot of the dispenser. The topmost item on the list is the product available at dispenser slot 1 of the dispenser, etc.
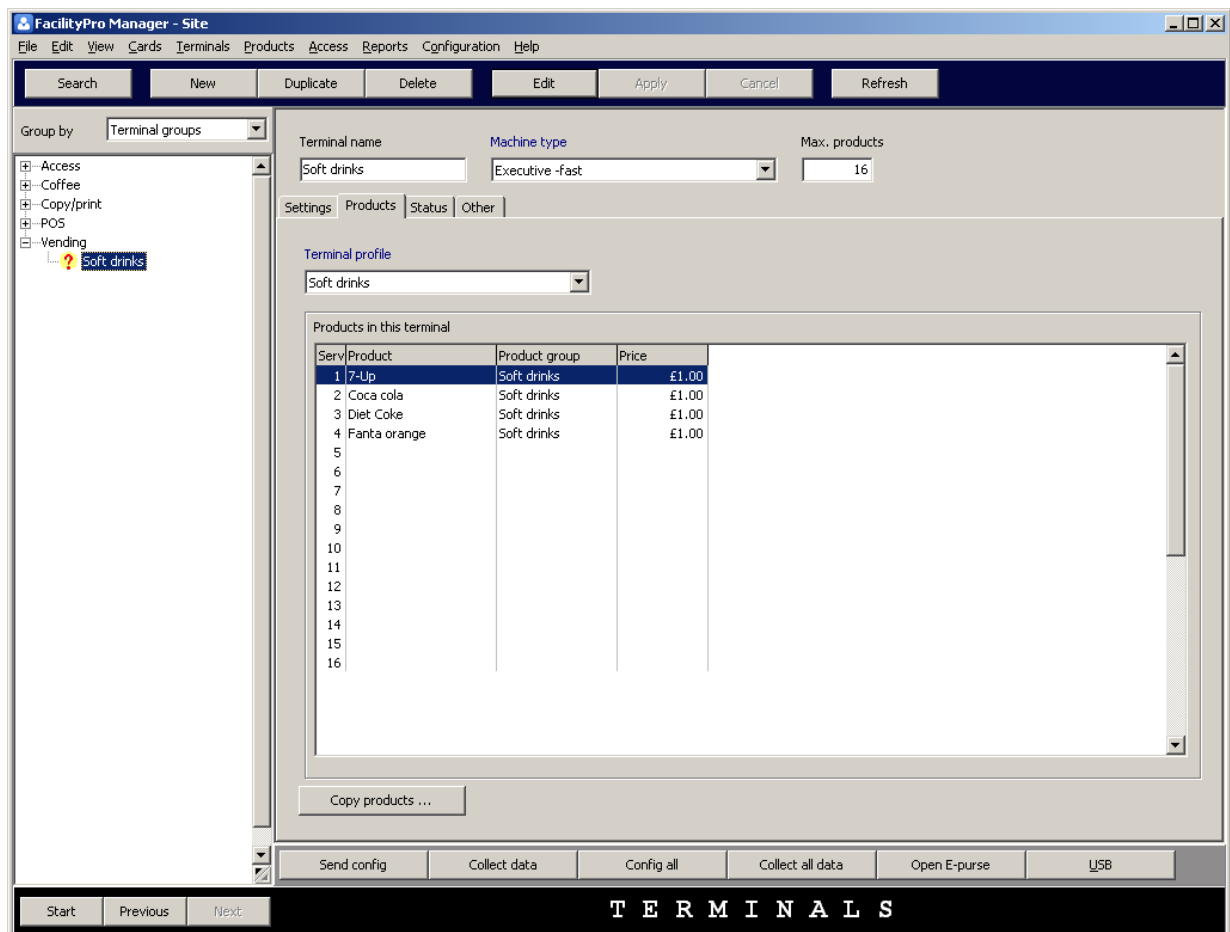
Figure 4-3 The tab 'Products' of the terminal data screen for sites with terminal profiles

4.1.2.1.3 The action button Copy products…

This paragraph applies only to sites where terminal profiles are not used, i.e. the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is not checked (§8.1.2.5).

Often, all the terminals with dispensers of the same machine type will have an identical list of available products. To avoid having to redefine that list of available products for each terminal with a dispenser of that machine type, there is the action button Copy products… on the tab 'Products' of the terminals data screen. This action button copies the list of available products at the selected terminal to all the terminals with dispensers of the same machine type. If you have grouped the terminals, the action button Copy products… will copy the list of available products at the selected terminal only to all the terminals within the selected group and with dispensers of the same machine type as the selected terminal.

How to copy the list of available products at a terminal to a number of terminals with dispensers of the same machine type with the action button Copy products…:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. If you want to send the list of available products at a terminal only to the terminals (with dispensers of a certain machine type) of one terminal group, collector, location, connection type or machine supplier, rather than to all the terminals with dispensers

of that machine type, make sure the terminals are grouped appropriately. Otherwise, make sure the terminals are un-grouped.

4. In the ungrouped record list, or within the group of terminals that you want to send the list of available products to, select the terminal with the list of available products that you want to copy to other terminals with dispensers of the same machine type.

5. Click the tab 'Products'. You will see the tab 'Products' (Figure 4-2).

6. Click Copy products…. FacilityPro Manager will ask 'Start copying products to all these terminals?', showing you on screen a list of all the terminals to which the list of available products will be copied if you proceed.

7. If you want to, you can print the list on screen by clicking on Print.

8. Click OK (or on the button Cancel to abort). All terminals on the site (or if the terminals were grouped, all terminals within the group to which the selected terminal belonged) with dispensers of the same machine type will now have the same list of available products.

4.1.2.2 The tab 'Access'

The tab 'Access' (Figure 4-4) is only used for access terminals, i.e. terminals where the product rendered by the dispenser is access. On the terminals data screen, the tab 'Access' will not be visible if the selected terminal is not an access terminal (if the unit type of the dispenser is not 'access' (§4.3)).

The fields of the tab 'Access' are listed and explained below:

1) Period of free access: a period during which that access terminal is unlocked, i.e. one can gain access without a card. You can choose from the timetables that exist in the database.

2) Access for all cards: if this check-box is checked all cards will be accepted at the terminal.

3) Zone: the zone to which the terminal belongs (§6.1). This is a read-only field.

Let us consider the access to the parking garage at the example site of this manual. Suppose we want all personnel to be able to use the parking garage during the day. Outside of normal working hours, however, anyone may use the parking garage. At that time there are less people in the building, so there is plenty of space in the parking garage. We must then create a timetable for the period that the parking garage will be 'unlocked', for instance from 10 pm – 7 am. On the tab 'Access' we will choose this timetable as the period of free access in the field 'Period of free access'. We must create a zone that includes all the access terminals to the parking garage (§6.1). We must then create an access group which includes this zone as well as a timetable defining 7 am – 10 pm as the timetable for this zone (§6.2.1). We must assign this access group to the user groups PERS-LA and PERS-OTHER (§3.4.2.3).
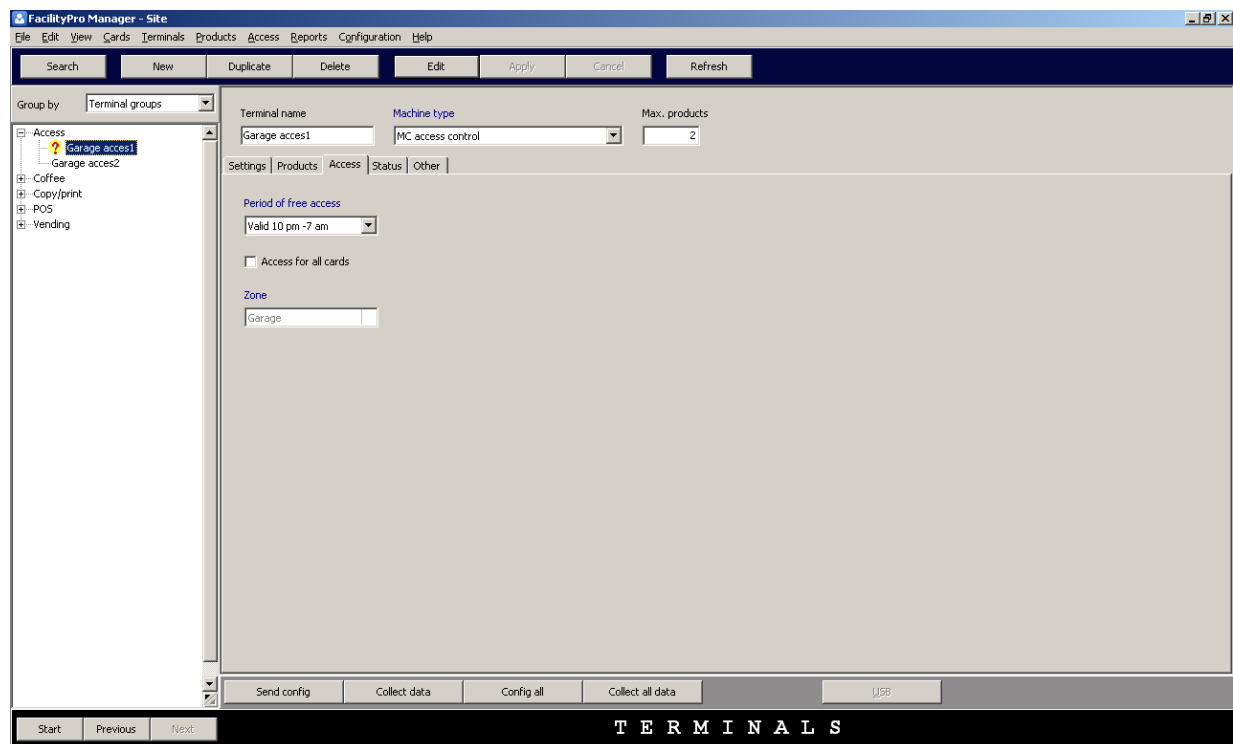
Figure 4-4 The tab 'Access' of the terminals data screen

4.1.2.3 The tab 'Status'

The tab 'Status' (Figure 4-5) has a number of read-only fields that provide information about the terminal and two action buttons. The action button Status is used to verify the status of the selected terminal (§4.1.2.3.1) and the action button Diagnose, can show the contents of a file that is stored in the Magnabox of the terminal and contains certain data about the functioning of the Magnabox, if there is an active connection with the terminal (§4.1.2.3.2).

The fields of the tab 'Status' are listed and explained below.

1) Network status: the network status of the terminal the last time it was polled or an attempt was made to poll it.
2) Network status date
3) Software version: the version of the software that is loaded in the Magnabox. This field will be filled in automatically the first time a connection with the terminal is established through the network. If the terminal is not connected to FacilityPro Manager through a network, the field 'Software version' will also be filled in automatically the first time a manual poll is completed with a USB stick or handheld. This is a read-only field.
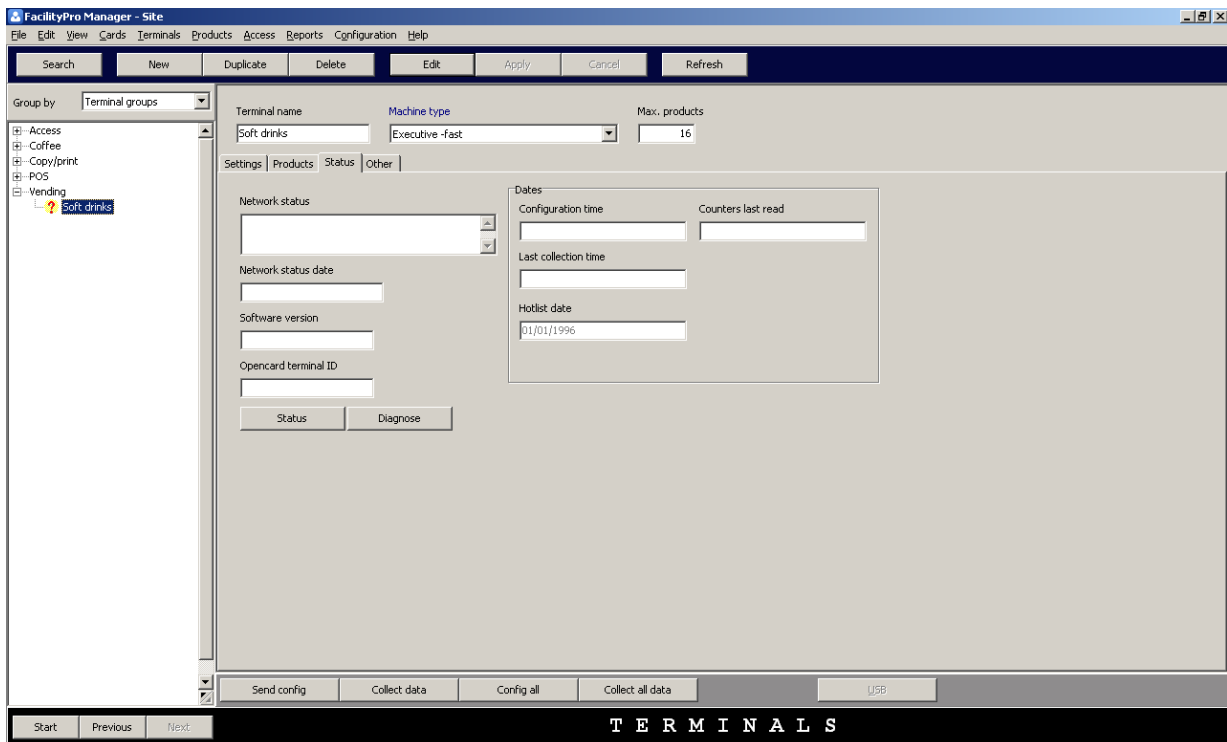
Figure 4-5 The tab 'Status' of the terminals data screen

4) Open E-purse terminalID: the value given to this terminal by the acquirer for open E-purse transactions. This is a read-only field. This field will not be visible unless Chipknip cards are accepted on site and there has been at least one collection. The actual communication and transport of the collections is done by the Chipknip module of FacilityPro Manager. Refer to the manual for the Chipknip module for further information about the use of Chipknip technology within electronic transaction systems managed by FacilityPro Manager.

5) Configuration time: the date and time the terminal last received new configuration files (from the collector or from a USB stick or handheld). This is a read-only field.

6) Last collection time: the date and time the collector last collected data from the terminal, even if this was only transaction data. This is a read-only field.

7) Hotlist date: the date that the terminal last received the hotlist. This is a read-only field.

8) Counters last read: the date and time the collector last successfully polled the terminal for the data from the Magnabox counters (and set the interim counters to zero). If the terminal is connected to a network, this will normally happen once a day. This is a read-only field.

9) Last money out time: the date and time the cash was last removed from a reload terminal. This field will only be visible if the terminal is a reload terminal and if the cash boxes have been emptied at least once.

10) Last open E-purse collection: the date and time of the last Chipknip collection on this terminal. This is a read-only field. This field will not be visible unless Chipknip cards are accepted on site and there has been at least one collection. The actual communication and transport of the collections is done by the Chipknip module of FacilityPro Manager. Refer to the manual for the Chipknip module for further information about

the use of Chipknip technology within electronic transaction systems managed by FacilityPro Manager.

For all networked terminals (i.e. terminals that have the value 'Network' in the field 'Connection'), the status of the terminal at the time the terminal data was last collected can be seen on the terminals data screen in the record list next to the terminal name (Figure 4-1). This makes it easy for the site manager to identify whether there are any terminals off-line or are out of order or in danger of becoming out of order, and take appropriate action if there are. Three different icons can be shown next to the terminal name that have the following meaning:

 terminal is on-line

 terminal has not yet been visited, therefore terminal status is unknown

 terminal is off-line, network connection was not possible, or there was an error during data collection or during configuration

4.1.2.3.1 The action button Status

The action button Status works differently, depending on the type of connection of the selected terminal (§4.1.1).

If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', the action button Status will not work.

If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'Network', Status will read the status of the terminal and show the result on the screen. Normally, Status will return the value 'Terminal OK'. But it can also return a value indicating an error in the terminal configuration. Table 4-1 below shows the values that status can have and their meaning.

How to use the action button Status for a 'Network' terminal:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Select the terminal for which you want to verify the status.
4. Click the tab 'Other'.
5. Click Status. (If there is no active network communication between FacilityPro Manager (the collector) and the selected terminal at that moment, FacilityPro Manager will show the message 'Can not access this terminal: [IP address]'). FacilityPro Manager will return the value of status, which you can interpret with the help of Table 4-1.
6. Click OK.

TERMINAL STATUS	DESCRIPTION
Terminal OK	OK
Terminal needs to be configured	The configuration which was sent was invalid
Config CRC error	There was an error during the transmission of the configuration
[file] not complete	The file [file] was received incomplete
[field] not set	The field [field] was not given a value (e.g. sitecode)
Hotlist not sorted	The hotlist is not sorted
No products loaded	A terminal has to have at least one product
Unknown [field]	The value of field [field] is unknown
Not all necessary timetables loaded	Not all the timetables in use by the configuration are actually loaded
Missing coin currencies	The coin currencies of all the coins in use should have a value
Missing bank note currencies	The bank note currencies of all the bank notes in use should have a value

Table 4-1 Possible values of the terminal status for connection type 'Network'

4.1.2.3.2 The action button Diagnose

When there is an active connection with a terminal, you can use the action button Diagnose to view the contents of a file that is stored in the Magnabox of that terminal and that contains data on the functioning of the Magnabox.

How to use the action button Diagnose for a terminal with connection 'Network' with which there is an active connection:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Select the terminal for which you want to use the action button Diagnose.
4. Click the tab 'Other'.
5. Click Diagnose. You will see the contents of the file 'diagnose.txt' that is read from the Magnabox of the selected terminal (Figure 4-6). If there is no active network connection with the terminal you will see the message 'Cannot access this terminal'.
6. If you want to print the contents of the file 'diagnose.txt', click Print.
7. Click OK to return to the terminals data screen.
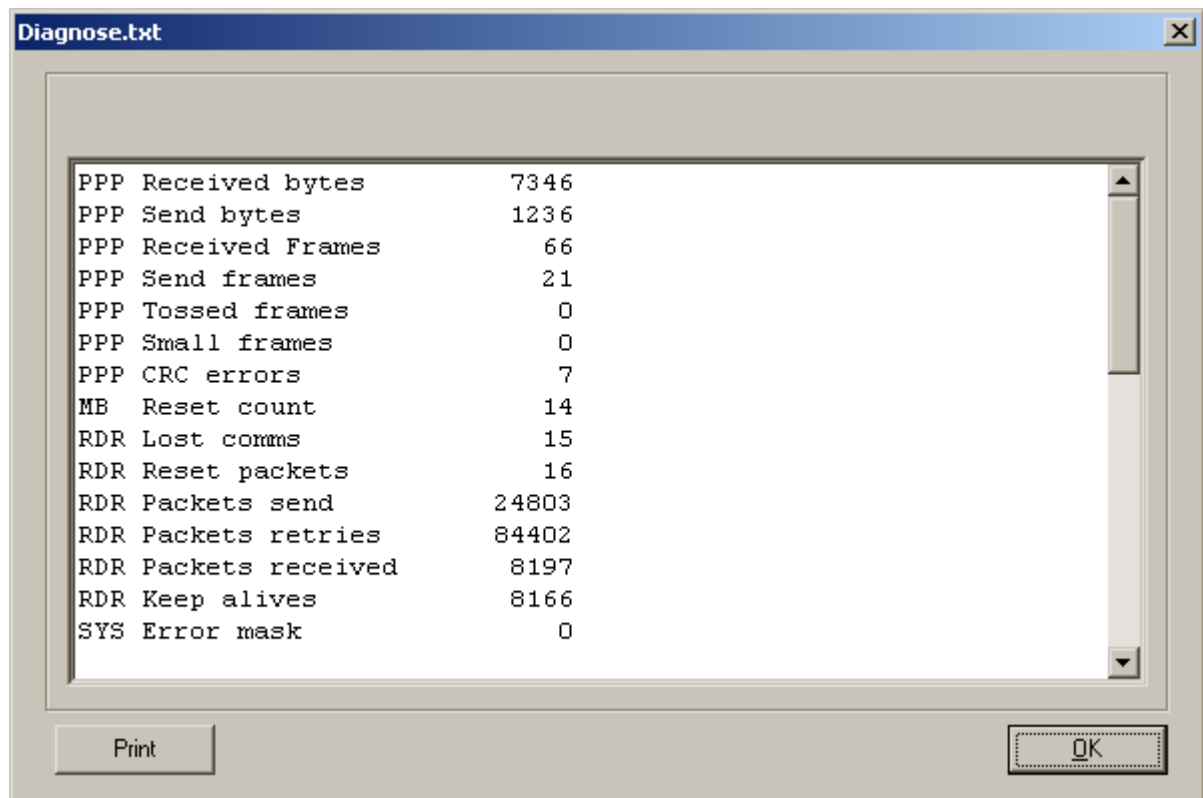
Figure 4-6 The result screen of the action button Diagnose

4.1.2.4 The tab 'Other'

On the tab 'Other' of the terminals data screen (Figure 4-7) you can view and edit a number of fields of the selected terminal.
The fields of the tab 'Other' are listed and explained below:

1) Welcome text: when the terminal is not active, two alternating screens will be shown on the display of the terminal. This field contains the first line of text of the first screen. If this field is not filled in the default value "WELCOME" will be used. The second line will always be "YOUR CARD PLEASE". The second screen will show the date and the time. This field will only be visible if terminal profiles are not used on your site (the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is not checked, §8.1.2.5). If terminal profiles are used, this field will be shown on the tab 'Settings' of the terminal profiles data screen (§5.1.1).

2) Welcome text 2: if this field is given a value, when the terminal is not active, three alternating screens will be shown on the display of the terminal in stead of two (see above). The third screen will show the text filled in in this field. To control the way lines are shown (the position of lines) commands can be placed in the text. The Magnabox will interpret these commands and implement them. The commands for a line of text must be placed at the beginning of that line. The commands are:
    a) '\c'   center the text on the display
    b) '\l'   left-align the text
    c) '\r'   right-align the text
    d) '\n'   new line

e) '\1'   this text must be on the 1st line
f) '\2'   this text must be on the 2nd line
g) '\3'   this text must be on the 3rd line
h) '\4'   this text must be on the 4th line

This field will only be visible if terminal profiles are not used on your site (the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is not checked, §8.1.2.5). If terminal profiles are used, this field will be shown on the tab 'Settings' of the terminal profiles data screen (§5.1.1).

3) Machine supplier: the machine supplier of the dispenser at this terminal.
4) Service memo
5) Memo
6) Header on receipt: text that will be printed on reload terminals and other terminals where receipts are printed by a printer controlled by the Magnabox.
7) Footer on receipt: text that will be printed on reload terminals and other terminals where receipts are printed by a printer controlled by the Magnabox.
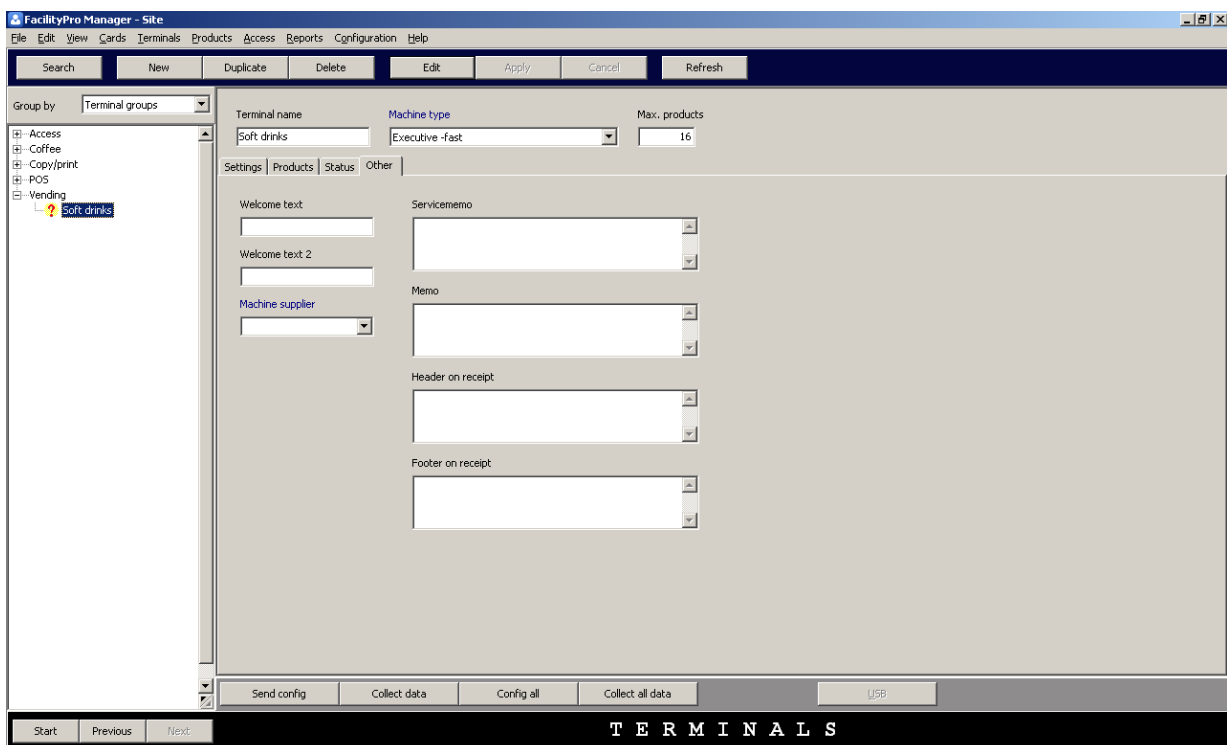
Figure 4-7 The tab 'Other' of the terminals data screen

4.1.3 The action buttons of the terminals data screen

You can use the action buttons of the terminals data screen to collect data from the terminals or send data to the terminals (configuration). If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', this data transfer must be realised with a USB stick or handheld respectively. We refer you to the manual of the COMET software, which you will use to realise data transfer between FacilityPro Manager and a terminal with a handheld.

4.1.3.1 The action button Send config

When changes are made to the database of FacilityPro Manager, the configuration of one of more of the terminals on the site may change as a result. Some examples are:

1) The prices of certain products are changed in the products table. The terminals that provide these products have to be updated with the new configuration.
2) The hotlist has been changed. All terminals have to be updated with the new configuration.

The collector carries out a poll round at predefined times (§8.4.1.2, field 'Loop period (min)'), several times a day (e.g. every hour), whereby it seeks connection with all the terminals which have a network connection (for other terminals the polling is done manually with a USB stick or handheld[3]).

If any changes have been made to the configuration of a terminal, this new configuration is sent to the terminal at the next poll round. The action button Send config is used when you do not want to wait for the next poll round, but want to send a changed configuration to a terminal immediately. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'Network', the action button Send config results in an immediate poll of the selected terminal, whereby the changed configuration is sent to the terminal. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', you should use the action buttons USB and iPAQ respectively to send configurations (§4.1.3.6 and §4.1.3.7), although the action button Send config will write the configuration files to the synchronisation directory for the USB stick or the PDA respectively, so that the configuration will be written to the terminal when the terminal is polled with the USB stick or with the PDA (after synchronisation). As regards the transaction and turnover data, you can choose between:

1) **Send configuration and do not collect terminal data:**
   No terminal data is collected, and the interim and cumulative counters are not reset. This is not recommended, as data might be lost, for instance if the changes in the configuration define that a product will no longer be available on that terminal.
2) **Send configuration and collect terminal data:**
   The terminal data is collected from the terminal (both transaction data and data from the Magnabox counters), thereby resetting the interim counters, but not the cumulative counters (this is the default setting for the action button Send config).
3) **Send configuration, collect terminal data and reset cumulatives:**
   The terminal data is collected from the terminal (both transaction data and data from the Magnabox counters), and both the interim and the cumulative counters are reset. One might decide to use this function at the beginning of a financial year or study year.

---

[3] This solution is no longer available but still in use at some existing sites

How to send a new configuration to a terminal with the action button Send config:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Select the terminal to which you want to send a new configuration.
4. Click Send config. FacilityPro Manager will show the Send config dialog screen (Figure 4-8).
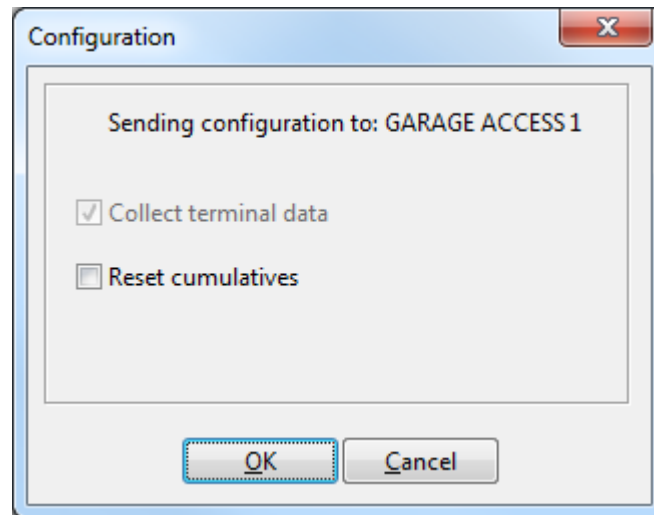
Figure 4-8 the dialog screen for Send config

5. If you want to collect the terminal data and send the new configuration, but do not want to reset the cumulative counters, go to step 8.
6. If you do not want to collect any terminal data from the terminal before you send the new configuration (not recommended, see above), click in the check-box 'Collect terminal data' to un-check it, and go to step 8.
7. If you want to collect the terminal data and send the new configuration and you also want to reset the cumulative counters, click in the check-box 'Reset cumulatives' to check it.
8. Click OK. (Click Cancel to abort the action.) If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', the configuration files will be written to the USB stick or to the synchronisation directory for the PDA respectively, after which you will see the message 'Done' (skip the remaining steps).
9. If the workstation you are working on is the workstation defined as the collector for the terminal to which you are trying to send the config (§4.1.1, field 'Collector'), go to step 10. Otherwise, FacilityPro Manager will try to access the terminal over the network from your workstation. If it succeeds in making a connection, go to step 11. If it does not succeed in making a connection, you will see the message 'This workstation has no direct access to the terminal, send task to collector?'. Click Yes to have the Send config executed by the collector for this terminal (or click No to abort the action). If the check-box field 'Is collector' of the collector for this terminal has not been checked (§8.4.1.1), FacilityPro Manager shows the message 'Workstation for this terminal is not configured as a collector' and the action is aborted. If the collector for this terminal is not running, FacilityPro Manager shows the message 'Collector is not active' and the action is aborted.
10. If there is no active network connection to the terminal, FacilityPro Manager will show the message 'Cannot access this terminal', you must click OK and the action is aborted.

11. Execution of the Send config will start. Depending on the choices you made in steps 5 through 7, the transaction and turnover data will or will not be collected from the terminal, the cumulatives will or will not be reset, and the new configuration will be sent to the terminal. While the Send config is being executed you will see a screen showing the progress of the action. Click Cancel if you wish to abort the action. If the Send config is successful, you will see the message 'Done'.

4.1.3.2 The action button Collect data

The collector carries out a poll round at predefined times (§8.4.1.2, field 'Loop period (min)'), several times a day (e.g. every hour), whereby it seeks connection with all the terminals which have a network connection (for other terminals the polling is done manually with a handheld). At each poll round the collector collects the transaction data from the terminals. Less frequently, e.g. once a day (§8.4.1.2.4) it also carries out a more extensive poll, also collecting the data from the Magnabox counters. These counters include turnover per product, per user group, number of transactions, etc. The interim and cumulative counters are collected, and the interim counters are reset (the interim counters keep track of data since the previous collection of data from the counters). The action button Collect data is used when you do not want to wait for the next poll round, but want to collect data from a terminal immediately. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'Network', this action button results in an immediate poll of the selected terminal, whereby the transaction data and the data in the counters are collected from the terminal and the interim counters are reset. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', you should use the action buttons USB and iPAQ respectively to collect data (§4.1.3.6 and §4.1.3.7), although the action button Collect data will look for terminal data files on the USB stick or in the synchronisation directory for the PDA respectively, and import the data in these files into the database.
If the field 'Skip this terminal' on the tab 'Settings' has been activated (§4.1.1), you will still be able to use the action button Collect data for this terminal.

How to collect data from a terminal with the action button Collect data:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Select the terminal from which you want to collect the transaction data and the turnover data.
4. Click Collect data. FacilityPro Manager will show the message 'Collect terminal data?'.
5. Click OK. (Click Cancel to abort the action.) If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', the terminal data files will be collected from the USB stick or from the synchronisation directory for the PDA respectively, after which you will see the message 'Done' (skip the remaining steps).
6. If the workstation you are working on is the workstation defined as the collector for the terminal from which you are trying to collect data (§4.1.1, field 'Collector'), go to step 7. Otherwise, FacilityPro Manager will try to access the terminal over the network from your workstation. If it succeeds in making a connection, go to step 8. If it does not succeed in making a connection, you will see the message 'This workstation has no direct access to the terminal, send task to collector?'. Click Yes to have the Collect data

executed by the collector for this terminal (or click No to abort the action). If the check-box field 'Is collector' of the collector for this terminal has not been checked (§8.4.1.1), FacilityPro Manager shows the message 'Workstation for this terminal is not configured as a collector' and the action is aborted. If the collector is not running, FacilityPro Manager shows the message 'Collector is not active' and the action is aborted.

7. If there is no active network connection to the terminal, FacilityPro Manager will show the message 'Cannot access this terminal', you must click OK and the action is aborted.

8. Execution of the Collect data will start. FacilityPro Manager gets the terminal data from the terminal and writes it to the database. While the action is being executed you will see a screen showing the progress. Click Cancel if you wish to abort the action. If the action is successful, you will see the message 'Done'.

4.1.3.3 The action button Config all

With this button you can send a new configuration to all the terminals which have the same type of connection as the selected terminal. If you have grouped the terminals, the action button Config all will send new configurations to all the terminals within the selected group and with the same type of connection as the selected terminal within that group.

If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'Network', the action button Config all results in an immediate poll of all the terminals (within the selected group, if the terminals are grouped) which have the connection type 'Network', whereby any changes in the configuration are sent to the terminals. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', you should use the action buttons and USB and iPAQ respectively to send configurations (§4.1.3.6 and §4.1.3.7), although the action button Config all will write the configuration files of all the terminals (within the selected group, if the terminals are grouped) which have the same connection type to the USB stick or to the synchronisation directory for the PDA respectively, so that the configuration will be written to the terminals when they are polled with the USB stick or the PDA (after synchronisation). As regards the transaction and turnover data, you can choose between:

1) **Send configuration and do not collect terminal data:**
No terminal data is collected, and the interim and cumulative counters are not reset. This is not recommended, as data might be lost, for instance if the changes in the configuration define that a product will no longer be available on that terminal.

2) **Send configuration and collect terminal data:**
The terminal data is collected from the terminals (both transaction data and data from the Magnabox counters), thereby resetting the interim counters, but not the cumulative counters (this is the default setting for the action button Config all).

3) **Send configuration, collect terminal data and reset cumulatives:**
The terminal data is collected from the terminals (both transaction data and data from the Magnabox counters), and both the interim and the cumulative counters are reset. One might decide to use this function at the beginning of a financial year or study year.

How to send a new configuration to a number of terminals with the action button Config all**:**

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. If you want to send a new configuration only to the terminals (with a certain connection type) of one terminal group, machine type, collector, location, or machine supplier, rather than to all the terminals with that connection type, make sure the terminals are grouped appropriately. Otherwise, make sure the terminals are un-grouped.
4. Select a terminal which is among those you want to configure.
5. Click Config all. FacilityPro Manager will show the first Config all dialog screen (Figure 4-9). If you were working in an ungrouped record list, you will see the second Config all dialog screen (Figure 4-10) and you can continue with step 8.
6. Select a radio button to indicate whether you want to configure all terminals on site with the same connection type as the selected terminal or only those in the same group as the selected terminal.
7. Click OK. You will see the second Config all dialog screen (Figure 4-10).
8. If you want to collect the transaction and turnover data and send the new configuration, but do not want to reset the cumulatives, go to step 11.
9. If you do not want to collect any transaction or turnover data from the terminals before you send the new configuration (not recommended, see above), click in the check-box 'Collect terminal data' to un-check it and go to step 11.
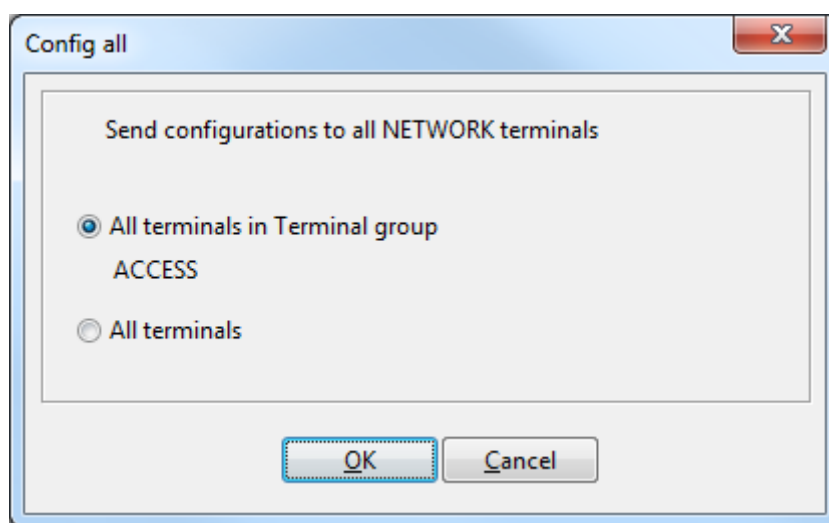
Figure 4-9 the first dialog screen for Config all
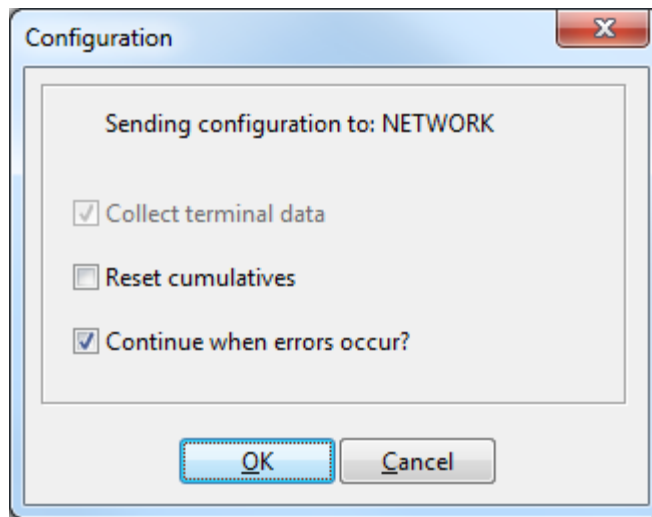
Figure 4-10 the second dialog screen for Config all

10. If you want to collect the transaction and turnover data and send the new configuration and you also want to reset the cumulatives, click in the check-box 'Reset cumulatives' to check it.

11. If you want to be informed of any errors that occur during the polling that results from the action Config all as they occur, rather than after the action is terminated, click in the check-box 'Show errors only afterwards?' to un-check it.

12. Click OK. (Or click Cancel to abort the action.) FacilityPro Manager will show a message informing you of the total number of terminals that will receive a new configuration (e.g. '9 terminals will be done').

13. Click OK. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', the configuration files for the appropriate terminals will be written to the USB stick or to the synchronisation directory for the PDA respectively, after which FacilityPro Manager will show a screen with the result of the action Config all. This screen will list the terminals targeted and tell you for each terminal, whether terminal data was collected from the USB stick or the synchronisation directory for the PDA, and for which terminals the configurations files were written to the USB stick or to the synchronisation directory for the PDA. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'Network', depending on the configuration options that you defined in previous steps, the transaction data and the turnover data will or will not be collected from the terminals, the cumulatives will or will not be reset, and the new configurations will be sent to the terminals. FacilityPro Manager will show a screen with the result of the action Config all. This screen will list the terminals targeted and tell you for each terminal, whether it was successfully polled, and if not, show an error message (Figure 4-11). The possible error messages that can be seen on this screen are listed in Table 4-2.

14. Click Print if you wish to print the results of the action Config all.

15. Click OK to return to the terminals data screen.
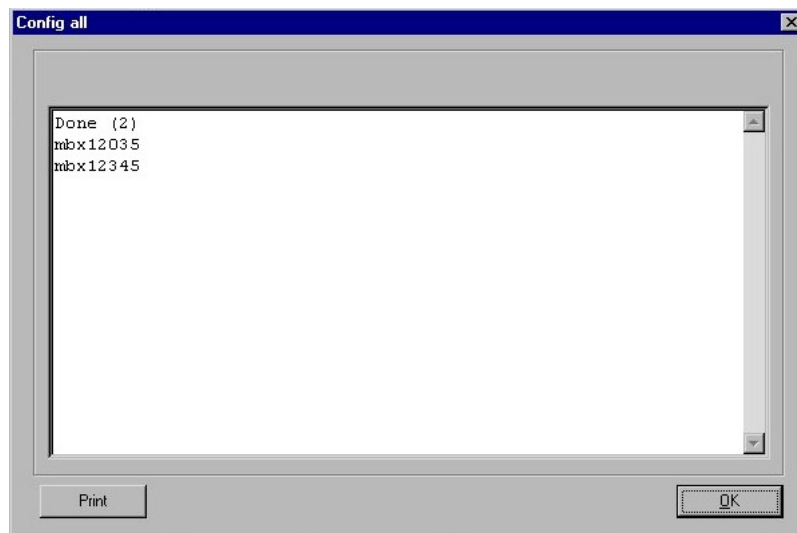
Figure 4-11 The screen showing the results of the action Config all

Error message	Means
'Collector is not active'	FacilityPro Manager attempted to execute the action through the collector for this terminal, but that collector is not running
'Workstation for this terminal is not configured as a collector'	FacilityPro Manager attempted to execute the action through the collector for this terminal, but the collector function of that workstation has not been activated (see check-box field 'Is collector' of the workstation in §8.4.1.1),
'Cannot access this terminal'	There is no active network connection to this terminal
'The collector did not process the command'	FacilityPro Manager attempted to execute the action through the collector for this terminal, but there is no active network connection between that collector and the terminal, so the task was not executed

Table 4-2 Possible error messages on the screen showing the results of the action Config all or the action Collect all data

4.1.3.4 The action button Collect all data

With this button you can collect the terminal data from all the terminals which have the same type of connection as the selected terminal. If you have grouped the terminals, the action button Collect all data will collect the terminal data from all the terminals within the selected group and with the same type of connection as the selected terminal within that group.
If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'Network', the action button Collect all data results in an immediate poll of all the terminals (within the selected group, if the terminals are grouped) which have the same connection type as the

selected terminal, whereby the transaction data and the data in the counters are collected from the terminals and the interim counters are reset. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value 'USB' or 'Handheld', you should use the action buttons USB and iPAQ respectively to collect data (§4.1.3.6 and §4.1.3.7), although the action button Collect all data will look for terminal data files for all the terminals (within the selected group, if the terminals are grouped) which have the same connection type on the USB stick or in the synchronisation directory for the PDA respectively, and import the data in these files into the database.

If the field 'Skip this terminal' on the tab 'Settings' has been activated (§4.1.1) for any of these terminals, you will not be able to poll those terminals.

How to get the terminal data from a number of terminals with the action button Collect all data:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. If you want to collect the terminal data only from the terminals (with a certain connection type) of one terminal group, machine type, collector, location, or machine supplier, rather than from all the terminals with that connection type, make sure the terminals are grouped appropriately. Otherwise, make sure the terminals are un-grouped.
4. Select a terminal which is among those from which you want to collect data.
5. Click Collect all data. Unless you were working in an ungrouped record list (if so, go to step 8), FacilityPro Manager will show the Collect all data dialog screen seen in Figure 4-12.
6. Select a radio button to indicate whether you want to collect data from all the terminals on site with the same connection type as the selected terminal or only those in the same group as the selected terminal.
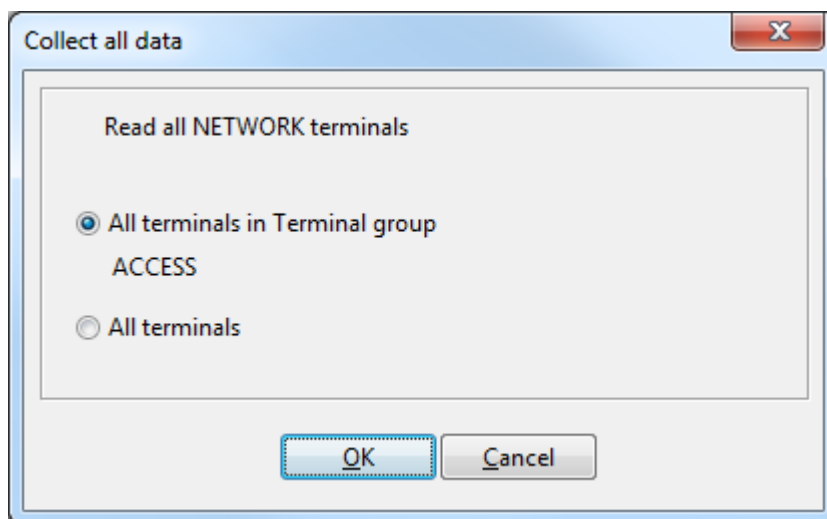
Figure 4-12 Collect all data dialog screen

7. Click OK. FacilityPro Manager will show the Collect all data dialog screen seen in Figure 4-13.
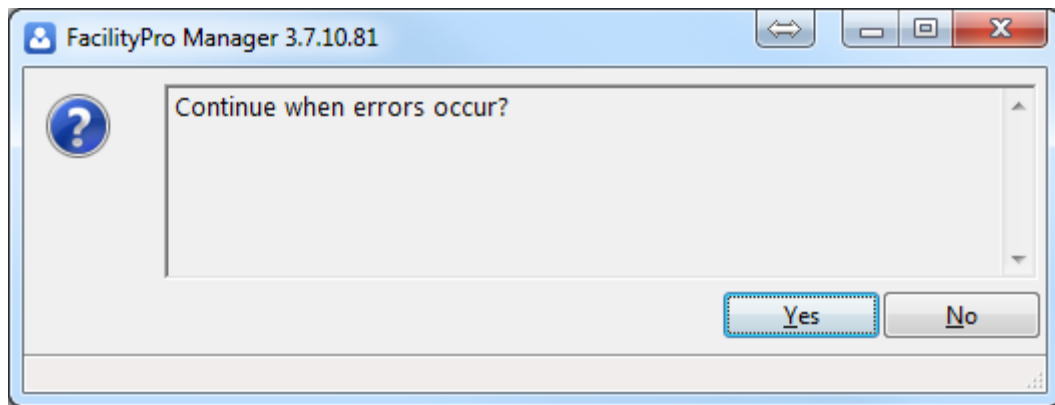
Figure 4-13 Collect all data dialog screen

8. Click Yes for FacilityPro Manager to first poll all the terminals, and then show a screen with the result of the action Collect all data. If you click No you will receive feedback on the polling of each terminal as it is visited, and then see the screen with an overview of the results of the action Collect all data (as above) when the last terminal has been polled. If the field 'Connection' on tab 'Settings' of the terminal data screen has the value'USB' or 'Handheld', the terminal data files will be collected from the USB stick or from the synchronisation directory for the PDA respectively, after which you will see a message showing the results (skip the next step).

9. FacilityPro Manager gets the terminal data from the terminals and writes it to the database. You will see the screen with the results of the action Collect all data. This screen will list the terminals targeted and tell you for each terminal, whether it was successfully polled, and if not, show an error message (Figure 4-14). The possible error messages that can be seen on this screen are listed in Table 4-2.
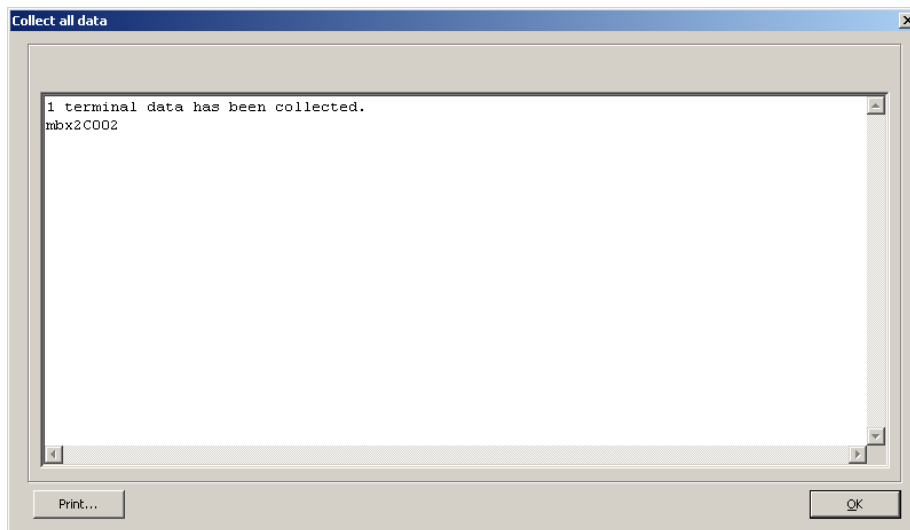
Figure 4-14 The screen showing the results of the action Collect all data

10. Click Print if you wish to print the results of the action Collect all data.
11. Click OK to return to the terminals data screen.

4.1.3.5 The action button Open E-purse

The action button Open E-purse is only applicable to sites in the Netherlands with terminals that accept the open bank card 'Chipknip' for payment. It is not yet described in this version of the FacilityPro Manager user manual.

4.1.3.6 The action button USB: sending config to and collecting data from USB terminals

The action button USB is only applicable to sites with terminals with connection type 'USB'. If there are no such terminals, it will not be active (shown in grey).

This action button is used as a part of the process of collecting data from and/or sending a new configuration to (all) terminals which have the value 'USB' in the field 'Connection' on the tab 'Settings' of the terminal data screen. Such terminals have a built-in USB module (i.e. internal USB stick) inside the Magnabox where the data from the counters in the Magnabox is stored automatically once a day.

For collecting data this process involves first inserting the external USB stick into the USB port of the Magnaboxes, at which time the data will be copied from the internal USB stick in the Magnabox to the external USB stick. At the same time an extra data collection will be saved on both USB sticks with the collection data up to that time. After data has been collected from one or several terminals in this way, the action button USB can be used to import the data into the FacilityPro Manager database.

For sending a new configuration to USB terminals this process involves inserting the external USB stick into the USB port of the Magnaboxes after using the action button USB, so that the configuration from the USB stick will be written to the Magnabox.

For USB data communication between the FacilityPro Manager and USB terminals to be effective, it is recommended that a high quality USB stick is used and that the firmware version in the Magnabox is 3.91 or higher. From that version on there are messages on the display of the Maganbox that indicate when the data transfer, which starts when the USB stick is inserted, is complete. For lower versions the only user interface is the flashing led on the USB stick, which will stop flashing when data transfer is complete. It is then imperative that the USB stick has a led light.

Data transfer can take a considerable amount of time, particularly when collecting data from a terminal that has not been collected for a long time.

When the action button USB is used FacilityPro Manager will execute the following steps for every terminal on the site with connection type 'USB':

1) The configuration files are stored in the config folder of the USB stick (\CONFIG), in a subdirectory which has the serial number of the terminal as its folder name (e.g. \CONFIG\MBX12345\). When the USB stick is next inserted into the USB port of the Magnabox at the terminal, the new configuration will be loaded into the terminal after the terminal data has been collected.
2) If there is data in the terminal data folder on the USB stick (\AUDIT) in a subdirectory which has the serial number of the terminal, the date the data was saved in the terminal and a number as its folder name (e.g. \AUDIT\MBX12345\20091201.001\), the terminal data will be imported into the database and then deleted from the USB

stick. An acknowledge file will be written on the USB stick with information about which data files were successfully imported in the FacilityPro database for this terminal. When the USB stick is next inserted into the USB port of the Magnabox at the terminal, this acknowledge file will be read and the data deleted from the terminal.

How to collect terminal data from and/or send a new configuration to USB terminals with the USB stick at the terminal:

1. Insert the USB stick for data communication between FacilityPro Manager and the USB terminals into the USB port of the Magnabox. The Magnabox display and the card reader display will show the message "USB stick inserted". For Magnaboxes with a firmware version lower than 3.91 there is no display message, but the led light on the USB stick will start flashing.
2. Wait for the messages "Reading configuration from USB stick", "Writing audit to USB stick", "Comparing audit on USB stick" and "Remove USB stick" and then remove the USB stick. Also, when data transfer is complete you will hear beeps until the USB stick has been removed. In the case of firmware version lower than 3.91, wait for the led light to stop flashing and then remove the USB stick. All available terminal data has now been saved on the USB stick. If there were acknowledge files for previously collected terminal data on the USB stick the appropriate data files will have been deleted from the internal USB stick in the Magnabox. Finally, if there was a new configuration for the terminal on the USB stick, it will have been written to the terminal.

How to collect terminal data from and/or send a new configuration to USB terminals with the action button USB:

1. Choose menu **Terminals**.
2. Choose **Terminals**.
3. Insert the USB stick for data communication between FacilityPro Manager and the terminals into the USB port of the work station. The field 'Terminal data folder' on the tab 'Settings' of the site options data screen (§8.1.1) must have been assigned the path (drive letter) that Windows assigns to access the USB stick.
4. Select a USB terminal from which you want to collect data or to which you want to send a new configuration.
5. Click USB. FacilityPro Manager will show a dialog screen seen in Figure 4-15.
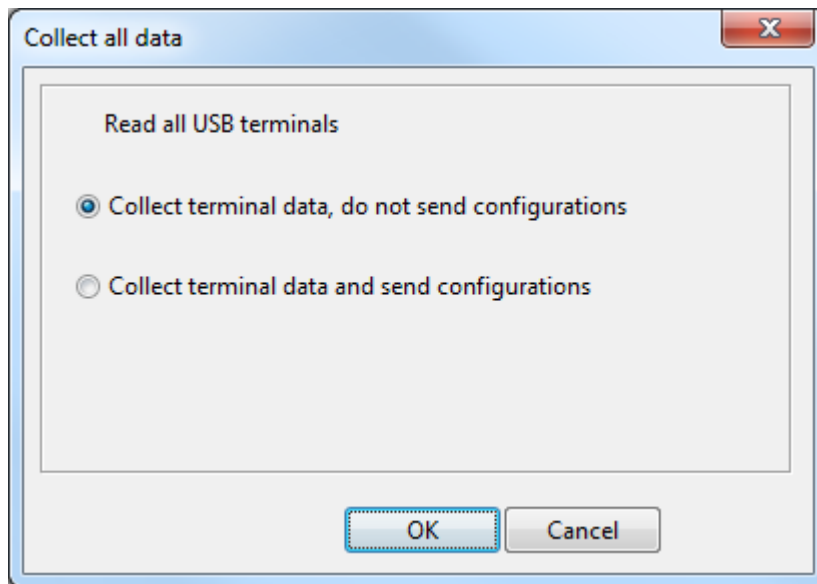
Figure 4-15 The dialog screen of the action button USB

6. Click OK to only read the data which has been collected from the terminals with the USB stick into the database and not send any new configurations to USB terminals. You will see the dialog screen below.
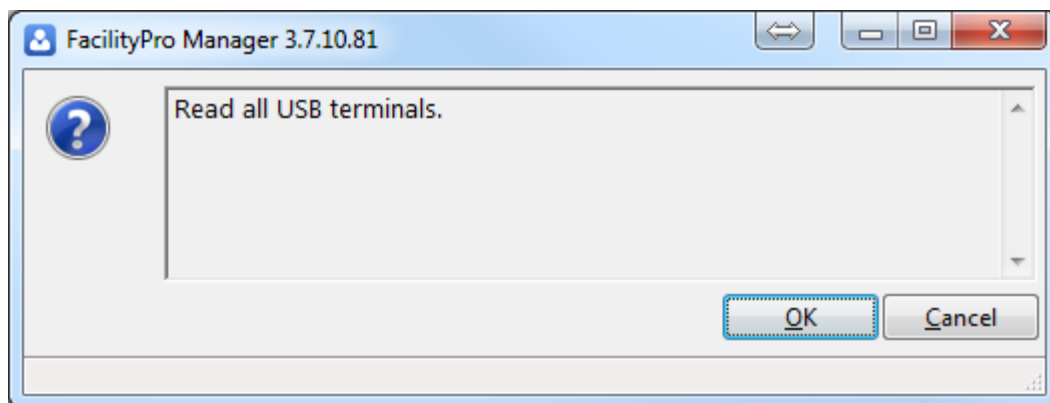
Select the radio button 'Collect terminal data and send configurations' and then click OK if you want to read the data which has been collected from the terminals with the USB stick into the database and also want to send a new configuration to USB terminals (you should choose this option if any changes have occurred in the configuration of the terminals, e.g. if any changes have been effected to the hotlist, or if any prices have been changed). You will see the dialog screen below.

FacilityPro Manager 3.7.10.81

Read all USB terminals and send configurations to all USB terminals.

OK   Cancel
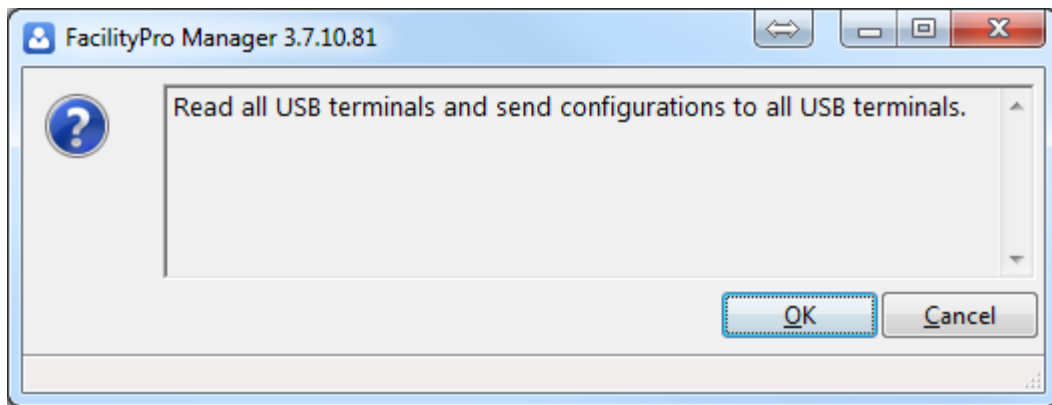
7. Click OK. All data present on the USB stick in the folder \audit will be read into the database and, depending on the choices made in the previous steps, the configuration for all USB terminals on site will or will not be written to the folder \config of the USB stick. You will see a screen with the results of the action. If the data present on the USB stick is recognised as data that is already in the database you will see a message 'This terminal data has already been collected'. This might happen if more than one USB stick is used on site to collect data from the terminals.

8. The next time you insert the USB stick in the Magnabox at the terminals for which data was imported from the USB stick and/or config files were saved on the USB stick, the acknowledge files for the imported data will be received by the Magnabox and the corresponding data files will be deleted from the internal USB stick, and/or the configuration will be updated in the terminal and the config files will be deleted from the USB stick.

4.1.3.7 The action button iPAQ

The action button iPAQ is only applicable to sites with terminals with connection type 'Handheld'. If there are no such terminals, it will not be visible. It is only active when a PDA is connected to the workstation, otherwise it is shown in grey.

When the action button iPaq is used FacilityPro Manager will execute the following steps for every terminal on the site with connection type 'Handheld':

1) If there has been a change in the configuration of the terminal the configuration file is stored in the synchronisation folder of the PDA. The next time the PDA synchronises, the file will be written to the PDA and the next time the terminal is visited with the PDA the terminal will receive the new configuration.

2) If there is a terminal data file on the PDA for the terminal, and therefore also in the synchronisation folder of the PDA, the terminal data will be imported into the database en then deleted from the synchronisation folder of the PDA. The next time the PDA synchronises, the file will be deleted from the PDA.

For more details we refer you to the manual of the COMET software, which you will use to realise data transfer between FacilityPro Manager and a terminal with a PDA.

4.2   Terminal groups

Reports can be generated on the use of all the terminals at each location, or of each machine type. For report purposes, it is often desirable to be able to group the terminals in other ways, such as by functionality (e.g. all the photocopiers machines). By defining terminal groups, reports can be generated on the use of all the terminals of any terminal group.

4.2.1   Creating a terminal group in the database

The data entry area of the terminal groups data screen has only one field with the name of the selected terminal group. To create a terminal group, you will have to fill in this field.

How to create a terminal group:

1. Choose menu **Terminals**.
2. Choose **Terminal groups**. You will see the terminal groups data screen (Figure 4-16).
3. Click New.
4. Click in the field 'Terminal group'.
5. Type the name of the new terminal group.
6. Click Apply.
7. Click OK. The new terminal group will be saved. The record list will include the name of this new terminal group.
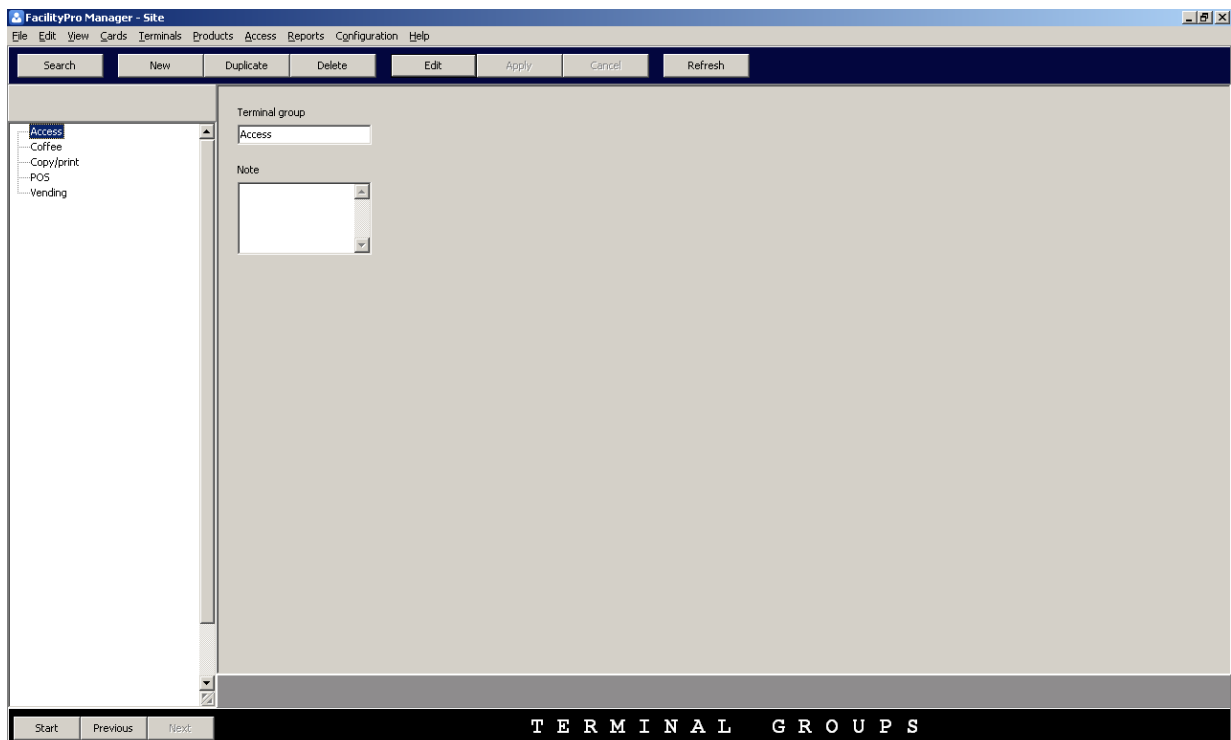
Figure 4-16 The terminal groups data screen

4.3 Machine types

If you buy a new dispenser, for instance a beverage machine or a photocopier, or a machine type that has not yet been entered into the database, you will have to create a machine type, containing the information FacilityPro Manager needs to be able to communicate with the new dispenser.

The tabs of the machine types data screen
The machine types data screen has the tabs: 'Parameters' and 'Amount settings'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a machine type can be viewed or edited.
Above the tabs, at the top of the data entry area of the machine types data screen are three fields: 'Machine type', 'Unit type' and 'Max. products'. These fields are therefore visible whichever is the active tab.
The tab 'Parameters' contains the basic data of a machine type, and is discussed in §4.3.1.
The tab 'Amount settings' will only be visible if the selected machine type has one of certain values of the field 'Unit type', which indicate that it is a reload terminal. You will use this tab to determine which coins, bank notes or money values can be used in the modules of the reload terminals of this machine type that handle money: the coin acceptor, the bank note acceptor, the hoppers and/or the Point of Sale Terminal. This tab is discussed in §4.3.2.1.

4.3.1 Creating a machine type in the database

The fields of the data entry area of the machine types data screen (when the tab 'Parameters' is active) are listed and explained below. The fields marked * must be assigned a value:

1) Machine type*: the name of the machine type.
2) Unit type*: defines the interface between the Magnabox of the terminal and the new dispenser. FacilityPro Manager is familiar with fourteen unit types. A new dispenser can only be connected to the electronic transaction system of the site, if its unit type is one of those fourteen. Depending on the unit type, various parameters will have to be entered for the new machine type. You should find both the unit type of your new dispenser and the value of the parameters to be filled in, in the documentation of your new dispenser.
3) Max. products*: specifies how many different products the dispenser can contain. The value of 'Max. products' depends on the number of service slots of the dispenser. If a photocopier can only make A4 copies, the value of 'Max. products' will be 1. Some snack machines can contain more than twenty different products. Generally this field will automatically be filled in when you choose a unit type, but it can still be edited.
4) Currency: If a currency is selected here, you will not see the machine types for reload terminals of other currencies. This field will not be visible unless the current administrator has the authorisation level 'avalailable' for 'Tools.run database script' (§8.3.1).
5) Parameters: This is actually a tab with a table containing the values of the parameters belonging to the unit type specified in the field 'Unit type'.
6) Memo: can contain additional information about the machine type.

How to create a machine type:

1. Choose menu **Terminals**.
2. Choose **Machine types**. You will see the machine types data screen (Figure 4-17).

Figure 4-17 The machine types data screen

3. Click New.
4. Edit the fields 'Machine type'and 'Unittype' and any other fields of the data entry area that you want to fill in (§2.1.2.4)
5. Click Apply.
6. Click OK. The new machine type will be saved. The record list will include the name of this new machine type. If the new machine type has one of certain values of the field 'Unit type', which indicate that it is a reload terminal, you must fill in the values of the fields of the tab 'Amount settings' by following the instructions given in §4.3.2.1.

4.3.2 The tabs of the machine types data screen

Apart from the tab 'Parameters' of the terminals data screen, there is one other tab, visible only for reload terminals, the use of which is described in the following paragraph.

4.3.2.1 The tab 'Amount settings'

The tab 'Amount settings' will only be visible if the selected machine type has one of certain values of the field 'Unit type', which indicate that it is a reload terminal and therefore has modules that handle money, such as coin or bank note acceptors which accept money from the card holder at a reload terminal, hoppers which return money at a reload terminal or a Point of Sale terminal module with which a card can be reloaded or purchased with a debit

card or card of an open e-purse system such as Chipknip. On the tab 'Amount settings' of the machine types data screen you can view and edit which coins, bank notes or money values can be used in each of the money handling modules of a terminal of that machine type.
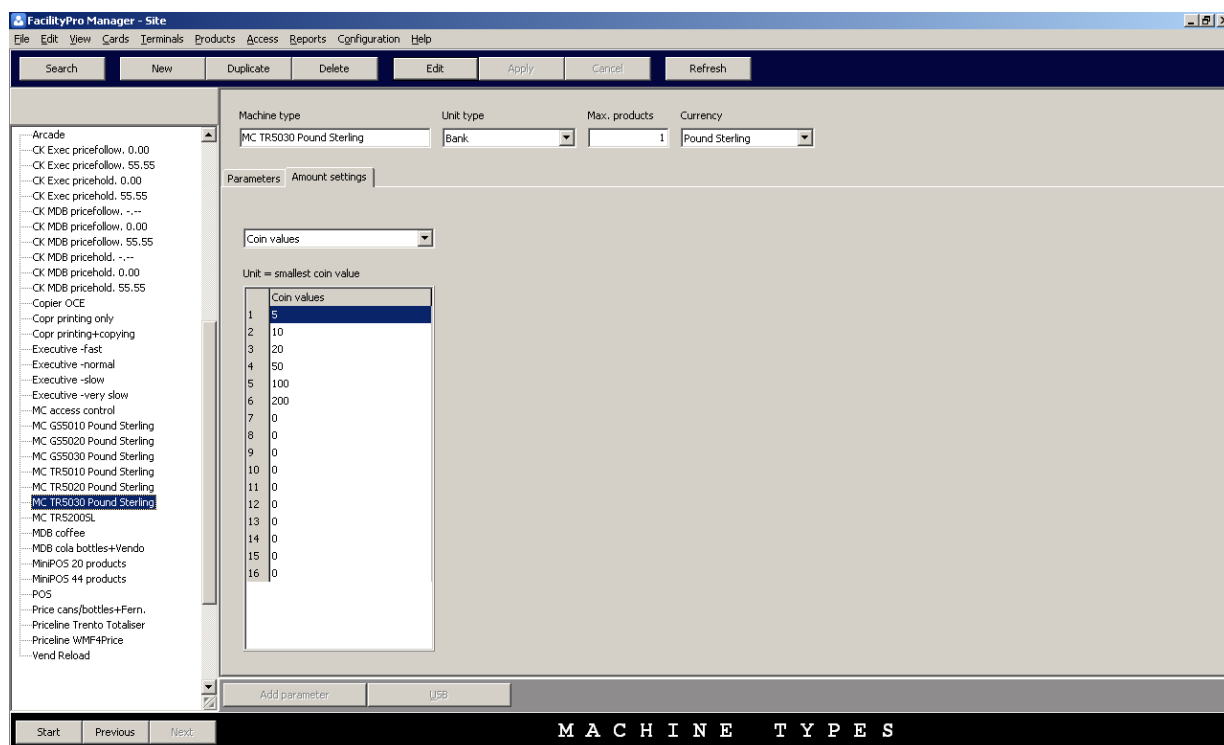
Figure 4-18 The tab 'Amount settings' of the machine types data screen (table 'Coin values')

The tab 'Amount settings' consists of a number of tables. The use of these tables is explained below:

1) **Coin values**: the values in the column 'Coin values' determine which coins the coin acceptor will accept. The coin acceptor is programmed to accept coins of a specific currency. Each row of the table 'Coin values' corresponds with a coin of that currency, in ascending order from the smallest to the largest coin of that currency. If a particular coin must be accepted by the coin acceptor, the value of the corresponding row must be set to the value of that coin, in units of the smallest currency unit. If a particular coin must not be accepted by the coin acceptor, the value of the corresponding row must be set to '0'. If the currency is Euros, and the smallest currency unit is therefore the cent, Table 4-3 means that the coin acceptor accepts the following coin types: 20 cents, 50 cents, 1 Euro and 2 Euros, and does not accept the coins of 5 cents and 10 cents.

	Coin values
1	0
2	0
3	20
4	50
5	100
6	200

Table 4-3 Coin values table

2) **Coin currencies**: This table is normally invisible. It is only visible when a site is in a transition period, converting from one currency to another (e.g. £ -> €). In this case the field E-day of the site record has a value. Generally the currency of the coins accepted by the coin acceptor will be the currency set as system currency (§8.1.2.2), and this value is automatically assigned to the corresponding row in the 'Coin currencies' table when a coin value is assigned to the 'Coin values' table. The currency of the coins accepted by the coin acceptor is a factory configuration, and can only be changed at hardware level. If the currency is different from the system currency, the values in the column 'Coin currencies' must be edited, which is done by choosing another currency from a drop-down list. Table 4-4 means that the coin acceptor accepts Pound Sterling coins of the values determined in the table 'Coin values'.

	Coin currencies
1	Pound Sterling
2	Pound Sterling
3	Pound Sterling
4	Pound Sterling
5	Pound Sterling
6	Pound Sterling

Table 4-4 Coin currencies table for Pound Sterling coins

3) **Bank note values**: the values in the column 'Bank note values' determine the values of the bank notes that will be accepted by the bank note acceptor, in units of the smallest currency unit. If the currency is Euros, and the smallest currency unit is therefore the cent, Table 4-5 means that the bank note acceptor accepts the following bank notes: 5 Euros, 10 Euros, 20 Euros and 50 Euros.

	Bank note values
1	500
2	1000
3	2000
4	5000

Table 4-5 Bank note values table

4) **Bank note currencies**: this table functions in the same way as the 'Coin currencies' table (see above).

5) **Hopper values**: the first column represents the numbered hoppers of the hopper module. The values in the 'Hopper values' column determine the value of the

coins in each of those hoppers, in units of the smallest currency unit of the currency set as system currency (§8.1.2.2). If the currency is Euros, and the smallest currency unit is therefore the cent, Table 4-6 means that, from right to left, the first hopper holds 10 cent coins, the second hopper holds 1 Euro coins, etc. The values that must be entered will be determined by the particular hopper wheels in the hoppers of the hopper module of this machine type, and if other values are used this will require a hardware change as the hopper wheels would need to be replaced because of the different size of each coin.

	Hopper values
1	200
2	50
3	100
4	10

Table 4-6 Hopper values table

6) **Hopper refill preset**: the first column represents the numbered hoppers of the hopper module. The values in the 'Hopper refill preset' column determine the total value of the coins that will be added to each of those hoppers, in units of the smallest currency unit of the currency set as system currency (§8.1.2.2), for each hopper refill command given at a terminal of this machine type. If the 'Hopper values' table is filled in as shown in Table 4-6, Table 4-7 would mean that the each hopper will be refilled with 50 coins at a time.

	Hopper refill preset
1	500
2	5000
3	2500
4	10000

Table 4-7 Hopper refill preset table

7) **Hopper max. level**: the first column represents the numbered hoppers of the hopper module. The values in the second column determine the maximum number of coins that can be held in each of those hoppers. The maximum value that can be filled in for each hopper depends on the specific type of coin that that hopper takes. We recommend filling a value of 200 for most coins (Table 4-8).

	Hopper max. level
1	200
2	200
3	200
4	200

Table 4-8 Hopper max. level table

8) **Cashless reload amounts**: (previously called Beanet button values) the values in the column 'Cashless reload amounts' determine the amounts with which the user at a reload terminal can reload his card using a debit card or a card of an open e-purse system such as Chipknip, or by debiting his payroll, in units of the smallest

currency unit of the currency set as system currency (§8.1.2.2). The user will choose between the available amounts by scrolling through the menu's on the reload terminal. If the currency is Euros, and the smallest currency unit is therefore the cent, Table 4-9 means that the user of the reload terminal can reload his card with 2 Euro, 5 Euro, etc., up to 100 Euro.

	Cashless reload amounts
1	200
2	500
3	1000
4	2000
5	5000
6	10000

Table 4-9 Cashless reload amounts table

4.3.3 The action buttons of the machine types data screen
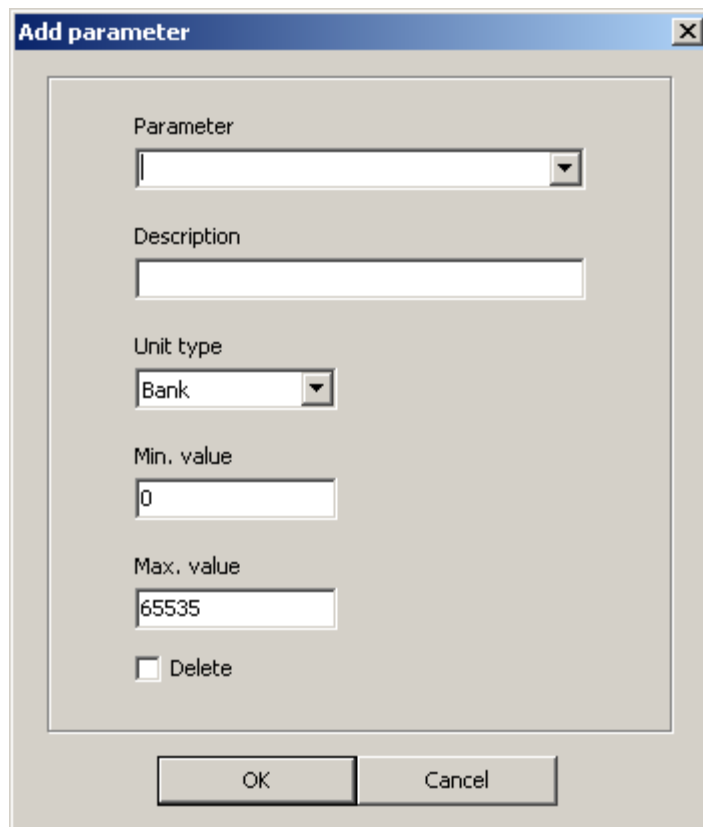
4.3.3.1 The action button Add parameter

The action button Add parameter can be used to add a parameter to the list of parameters of a specific unit type. This might be an existing parameter, already known to FacilityPro Manager, or a new parameter. The database of FacilityPro Manager includes a table of all the known parameters.
The action button Add parameter can also be used to remove a parameter from the list of parameters of a specific unit type.

How to add a parameter to the list of parameters of a unit type:

1. Choose menu **Terminals**.
2. Choose **Machine types**.
3. Click Edit.
4. Click Add parameter. You will see a dialog screen (Figure 4-19).
5. If the parameter you want to add already exists, click the arrow next to the field 'Parameter'. You will see a list of parameters known to FacilityPro Manager. If the parameter you want to add does not yet exist, click in the field 'Parameter'.
6. Select the parameter you want to add or type the name of the new parameter.
7. Click the arrow next to the field 'Unit type'. You will see a list of unit types.
8. Select the unit type for which you want to add the parameter.
9. If the parameter you want to add does not yet exist, click in the field 'Min. value' and type the minimum value for this new parameter. (If the parameter you want to add already existed 'Min. value' and 'Max. value' will have been automatically filled in when you selected the parameter in step 6).

Figure 4-19 The Add parameter dialog screen

10. If the parameter you want to add does not yet exist, click in the field 'Max. value' and type the maximum value for this new parameter.
11. Click OK. If the parameter you want to add does not yet exist, you will be asked 'Parameter does not exist. Add to list?'. Click Yes. The parameter is added to the list of parameters of the unit type specified in step 8. You must edit all existing machine types of this unit type to assign an appropriate value to the new parameter. (If the parameter you have added did not yet exist it will now have been added to the list of known parameters).

How to delete a parameter from the list of parameters of a specific unit type:

1. Choose menu **Terminals**.
2. Choose **Machine types**.
3. Click Edit.
4. Click Add parameter.
5. Click the arrow next to the field 'Parameter'. You will see a list of parameters known to FacilityPro Manager.
6. Select the parameter you want to remove.
7. Click the arrow next to the field 'Unit type'. You will see a list of unit types.
8. Select the unit type from which you want to remove the parameter.
9. Click in the check-box 'Delete'.
10. Click OK.

4.3.3.2 The action button USB

The action button USB is only applicable to sites with terminals with connection type 'USB'. If there are no such terminals, it will not be active (shown in grey).

The action button USB can be used to write generic configuration files for all terminals with this machine type to a USB stick. When the USB stick is inserted into a terminal of this machine type which has no configuration, this generic configuration is loaded into the terminal. Follow the steps in §4.1.3.6 under the entry "How to collect terminal data from and/or send a new configuration to USB terminals with the USB stick at the terminal" to load the configuration into the terminal).

This function makes it possible to configure a large number of terminals at a new site during the installation phase, even if the Magnabox numbers of those terminals are not known in advance, which is generally the case during installation of handheld terminals. The generic configuration is taken from the terminal with the corresponding machine type with the lowest terminalID.

How to write generic configuration files to a USB stick:

1. Make sure all the terminals that should receive the generic configuration have the correct products defined on the tab 'Products'. First, the tab 'Products' should be defined for one of the terminals (see §4.1.2.1.1 Defining which products are available at a terminal or §4.1.2.1.2 Defining which products are available at a terminal through a terminal profile). Then the list of products should be copied to all the terminals by using the action button Copy products… on the tab 'Products' (see §4.1.2.1.3), or, if terminal profiles are used, by choosing the same terminal profile for all those terminals.
2. Choose menu **Terminals**.
3. Choose **Machine types**.
4. Select the machine type for which you want to write generic configuration files to the USB stick. (If you want to write generic configuration files for all machine types to the USB stick you can skip this step.)
5. Click USB. You will see a dialog screen as in Figure 4-20.
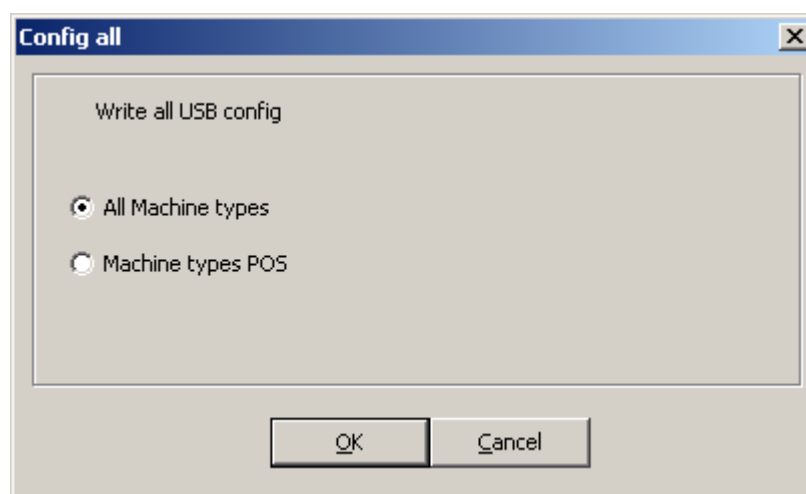
Figure 4-20

6. Select the appropriate radio button to write configuration files for the selected machine type only or for all machine types to the USB stick.
7. Click OK. You will see a dialog screen as in Figure 4-21.
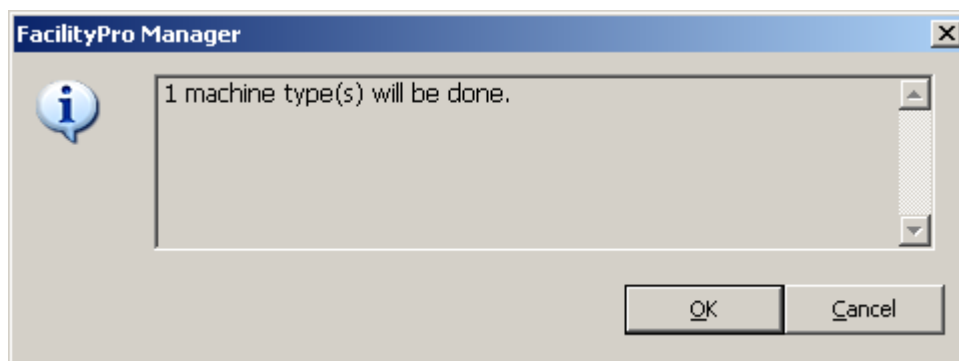
Figure 4-21

8. Click OK. The configuration files will be written to the USB stick and you will see a result screen (Figure 4-22). The configuration is written to a folder on the USB stick with the name config\[unit type].[descriptor version]\[machine type] and consists of files with the name <ALL.*>.
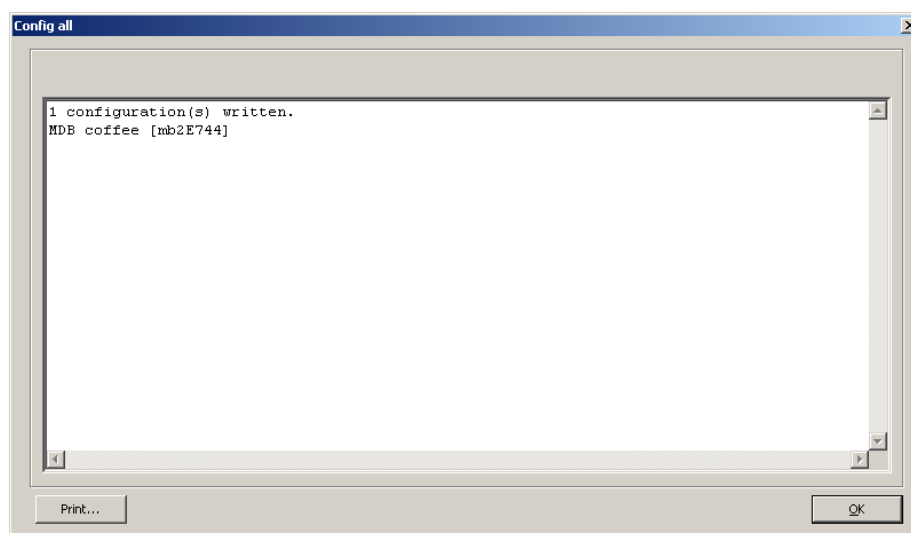
Figure 4-22

4.4   Locations

A location is the physical place where a terminal and the dispenser it is connected to are installed. A site might have terminals in various buildings, and defining locations makes site management more practical. FacilityPro Manager offers the possibility of defining not only the location of a terminal, but also the sublocation 1 within that particular location, and the sublocation 2 within that particular sublocation 1. In this manner you could for instance, for a site which has terminals spread out over various cities in various provinces, determine the province name in location, the city name in sublocation 1 and the floor or wing and the building name in sublocation 2 (RED TOWER, A3). This allows you to generate reports per province, per city and/or per sublocation 2.

4.4.1 Creating a location in the database

The data entry area of the locations data screen has only two fields: one is the name of the selected location and the other is notes on this location. To create a location, you will have to fill in at least the name field.

How to create a location:

1. Choose menu **Terminals**.
2. Choose **Locations**, and if a sub-menu appears choose **Locations** again. You will see the locations data screen (Figure 4-23).
3. Click New.
4. Fill in the field 'Location' and the field 'Note' if you wish.
5. Click Apply.
6. Click OK. The new location will be saved. The record list will include the name of this new location.
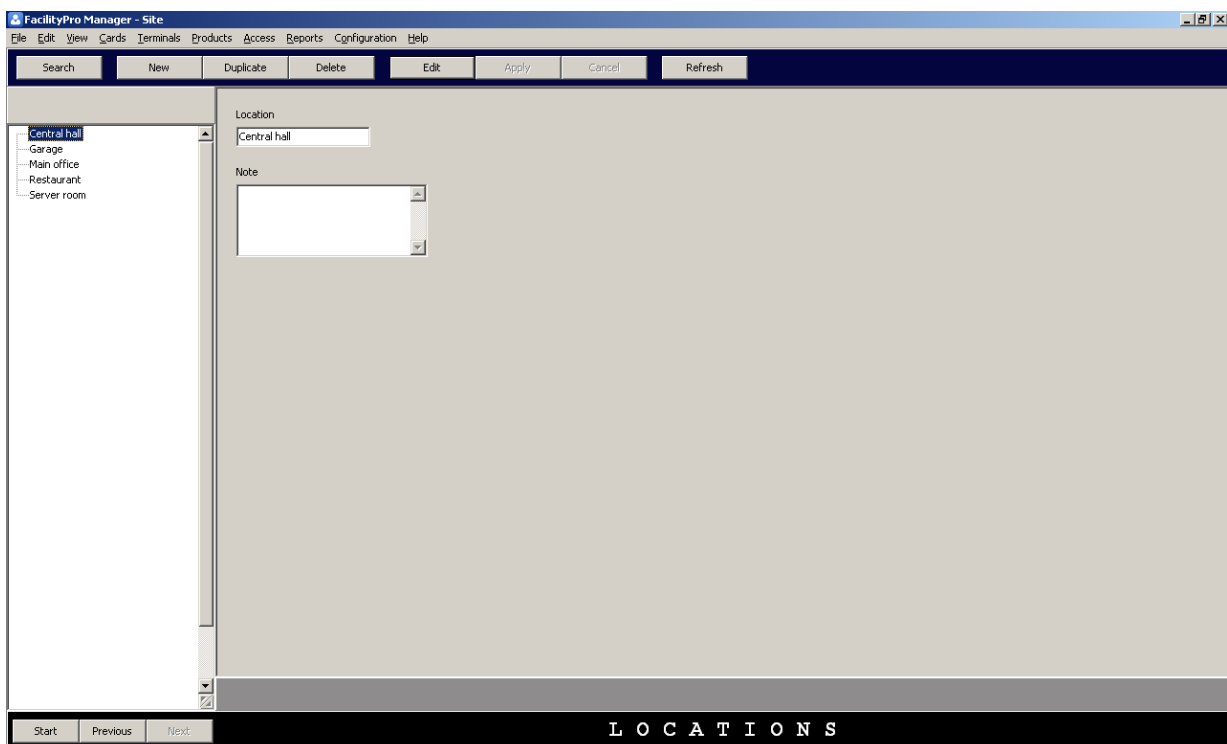
Figure 4-23 The locations data screen

4.4.2 Creating a sublocation in the database

The data entry areas of the sublocation 1/sublocation 2 data screens have three fields: the name of the selected sublocation, the location/sublocation 1 that the sublocation 1/sublocation 2 belongs to and a note field. To create a sublocation 1/sublocation 2, you will have to fill in at least the field 'Sublocation 1'/'Sublocation 2' and the the field 'Location'/'Sublocation 1'.

How to create a sublocation:

1. Choose menu **Terminals**.
2. Choose **Locations** and then **Sublocations 1** or **Sublocations 2**. You will see the corresponding sublocations data screen (Figure 4-24).
3. Click New.
4. Fill in the field 'Sublocation 1' (or 'Sublocation 2') and the field 'Note' if you wish.
5. Change the value of the field 'Location'/'Sublocation 1' if you wish.
6. Click Apply.
7. Click OK. The new sublocation will be saved. The record list will include the name of this new sublocation.

Figure 4-24 The sublocations 1 data screen

4.5 Machine suppliers

The machine supplier is the company from which the dispenser at a certain terminal was bought.

If there is a problem with a dispenser, you can quickly access the data of the supplier for that dispenser, by selecting the terminal connected to that dispenser on the terminals data screen

and pressing the hyperlink 'Machine supplier' on the tab 'Other'. The machine suppliers data screen will be opened, showing the supplier of the defective dispenser.

4.5.1   Creating a machine supplier in the database

The data entry area of the machine suppliers data screen shows fields with the name, address and phone number of the selected machine supplier. To create a machine supplier, you will have to fill in at least the name field.

How to create a machine supplier:

1. Choose menu **Terminals**.
2. Choose **Machine suppliers**. You will see the machine suppliers data screen (Figure 4-25).
3. Click New.
4. Edit the field 'Machine supplier' and any other fields of the data entry area that you want to fill in (§2.1.2.4).

Figure 4-25 The machine suppliers data screen

5. Click Apply.
6. Click OK. The new machine supplier will be saved. The record list will include the name of this new machine supplier.

5 Products

The essence of an electronic transaction system is that products may be rendered to card holders at the various terminals of the site, whereby the right to obtain the product is established through the information on the smartcard, and the payment (if any) is effected electronically, from the balance on the smartcard or from the subsidy amount on the smartcard assigned through a subsidy right (§5.4). Examples of products that a card holder might obtain with his card at a terminal are: a cup of coffee, a candy bar, access to the parking garage, a photocopy, or a revalue of his card.

The main menu 'Products' of FacilityPro Manager has menu options which open the data screens representing the tables in the database that contain information related to products: products, product groups and rights. If the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is checked, there will also be a menu option 'Terminal profiles'.

5.1 Terminal profiles

Terminal profiles can be used to assemble specific configuration data that will be the same for a number of terminals. The configuration data that is defined in a terminal profile includes:

1) the welcome text shown on the display of the terminals when they are idle
2) the products sold at the terminals and their price (or prices if the field 'Number of extra prices' on the tab 'Terminal configuration' of the site options data screen has a value greater than 0)
3) information on which VAT rates to use for which user group.

The menu option 'Terminal profiles' will not be available in the menu 'Products', unless the field 'Terminal profiles' on the tab 'Terminal configuration' of the site options data screen is checked (§8.1.2.5).
On the terminal profiles data screen, the record list is a list of all the terminal profiles. From this screen you can view, create, edit, and delete terminal profiles.

5.1.1 Creating a terminal profile in the database

The fields of the data entry area of the terminal profiles data screen (when the tab 'Settings' is active) are listed and explained below. The fields marked * must be assigned a value:

1) Profile*: the name of the terminal profile
2) Max. products: should specify the number of products that will be defined in this terminal profile, which will normally be equal to the value of the field with the same name on the terminals data screen of the terminal(s) that this terminal profile will be assigned to.

3) Welcome text: this field is explained in the paragraph on the tab 'Other' of the terminals data screen (§4.1.2.4), which is where the field is shown if terminal profiles are not used on your site.
4) Welcome text 2: this field is explained in the paragraph on the tab 'Other' of the terminals data screen (§4.1.2.4), which is where the field is shown if terminal profiles are not used on your site.

How to create a terminal profile:

Note: To create a terminal profile the appropriate products must exist in the database.

1. Choose menu **Products**.
2. Choose **Terminal profiles**. You will see the terminal profiles data screen (Figure 5-1). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Edit the field 'Profile' and the field 'Max. products' and any other fields of the data entry area that you wish to fill in or change.

Figure 5-1 The tab 'Settings' of the terminal profiles data screen

5. On the tab 'Products', define which products are available at terminals with this terminals profile, by following steps 5 through 12 of §5.1.2.1. You can also define the available products at a later stage by following all the instructions in that paragraph.

6. On the tab 'VAT User groups', define which user groups should be assigned a specific VAT rate (§8.1.2.5), by following steps 5 through 11 of §5.1.2.2. You can also define which user groups should be assigned a specific VAT rate at a later stage by following all the instructions in that paragraph.

7. Click Apply.

8. Click OK. The new terminal profile will be saved. The record list will include the name of this new terminal. You should assign this terminal profile to the appropriate terminals by filling in the field 'Terminal profile' on the tab 'Products' of the terminals data screen for each terminal (§4.1.2.1).

5.1.2 The tabs of the terminal profiles data screen

Apart from the tab 'Settings' of the terminal profiles data screen, there are two other tabs, the use of which is described in the following paragraphs.

5.1.2.1 The tab 'Products'

On the tab 'Products' of the terminal profiles data screen you can view and edit which product is available on each of the dispenser slots of the dispensers at the terminals which will be assigned this terminal profile. You can also fill in which prices will be charged for these products.

How to fill in the products which are available at terminals with this terminal profile:

Note: the products to be filled in must exist in the database.

1. Choose menu **Products**.
2. Choose **Terminal profiles**.
3. Select the terminal profile for which you want to define which products it provides.
4. Click Edit.
5. Click the tab 'Products'. You will see the tab 'Products' (Figure 5-2). On the right of the tab you will see a list of products known to FacilityPro Manager, grouped by product group. On the left, you will see a list (which might be empty) of products belonging to this terminal profile. The length of this list is equal to the value of the field 'Max. products' of this terminal profile. Each item on this list refers to a different service slot of the dispensers. The topmost item on the list is the product available at dispenser slot 1 of the dispensers, etc.
6. Select in the list on the left, the position that represents the dispenser slot for which you want to define the available product.
7. In the list on the right, click the plus-sign next to the product group to which the product you want to assign belongs. You will see a list of the products of this product group.
8. Select (still in the list on the right) the product you want to assign to the selected position of the list on the left.
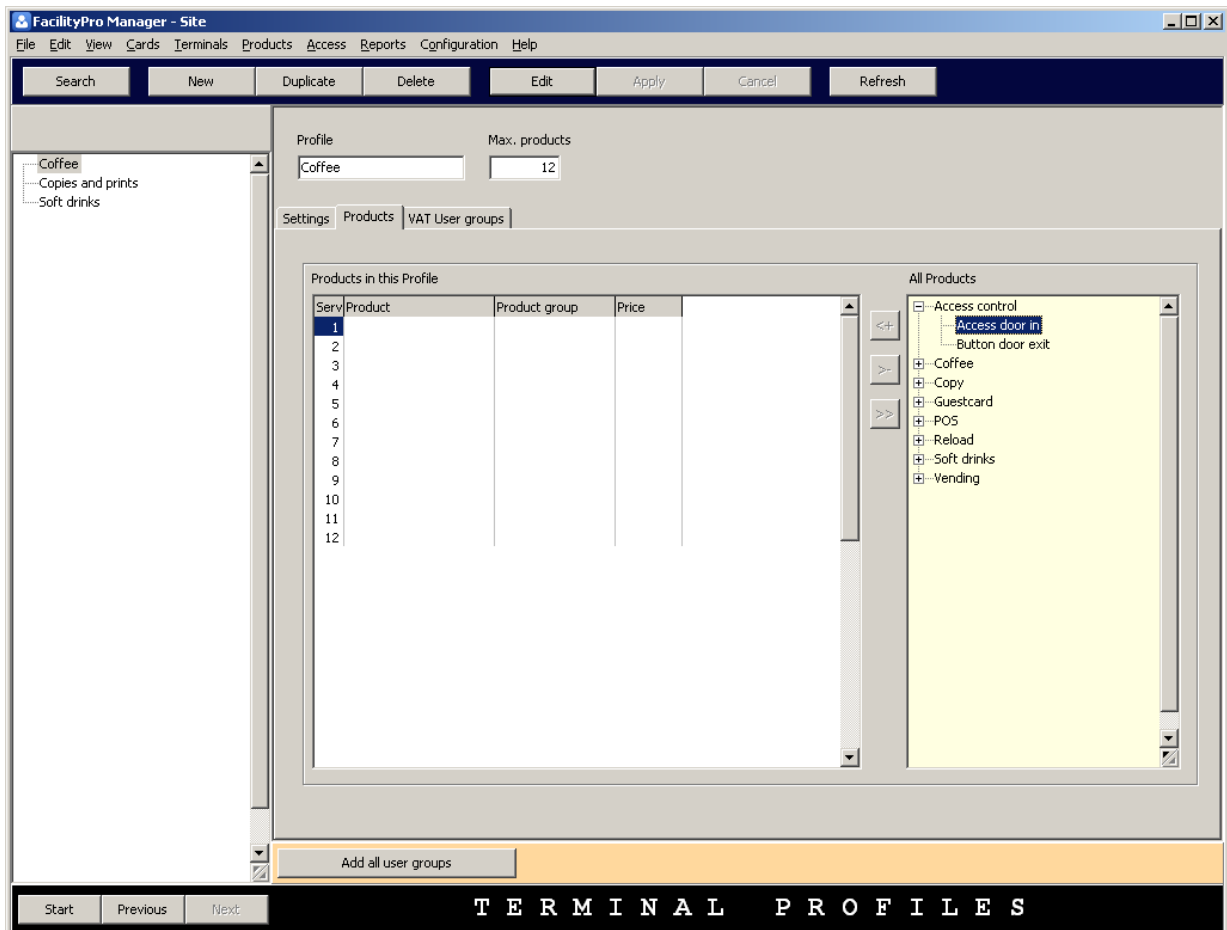
Figure 5-2 The tab 'Products' of the terminal profiles data screen

9. Click the arrow <+ to assign the selected product to the selected position. You have now defined that this product is available at the represented dispenser slots. The price that is shown in the column 'Price' in the list on the left is the price defined in the field 'Price' on the products data screen. If no price has been defined there, the price shown is £999.99, and it should be edited here to reflect the price that should be charged for this product when this terminal profile is chosen.[4]

10. Repeat steps 6 through 9 to assign more products. Usually, but not necessarily, you will enter a product for each slot in the list on the left.

11. If you want to delete a product from the list on the left, select the product and click the arrow >- to delete it.

12. If you want to delete all products from the list on the left, click the arrow >> to delete them all.

13. Click Apply.

14. Click OK. The edited terminal profile will be saved.

5.1.2.2 The tab 'VAT User groups'

On the tab 'VAT User groups' of the terminal profiles data screen you can assign specific VAT

---

[4] Note: if terminal profiles are used different prices can be definied for the same product per terminal profile. When the price of a product is defined in the terminal profile this price overrules the price defined in the field 'Price' of the products data screen.

rates to user groups. There are three VAT rates that can be assigned, 'Zero', Medium' and 'High', and the percentages for these VAT rates are defined in the field 'VAT rates' on the tab 'Terminal configuration' of the site options data screen (§8.1.2.5). If you assign a specific VAT rate to a user group for the selected terminal profile, all terminals which will be assigned this terminal profile will apply this VAT rate for all transactions with cards belonging to that user group. Reports can then be generated which show how much VAT is due for sales effected.
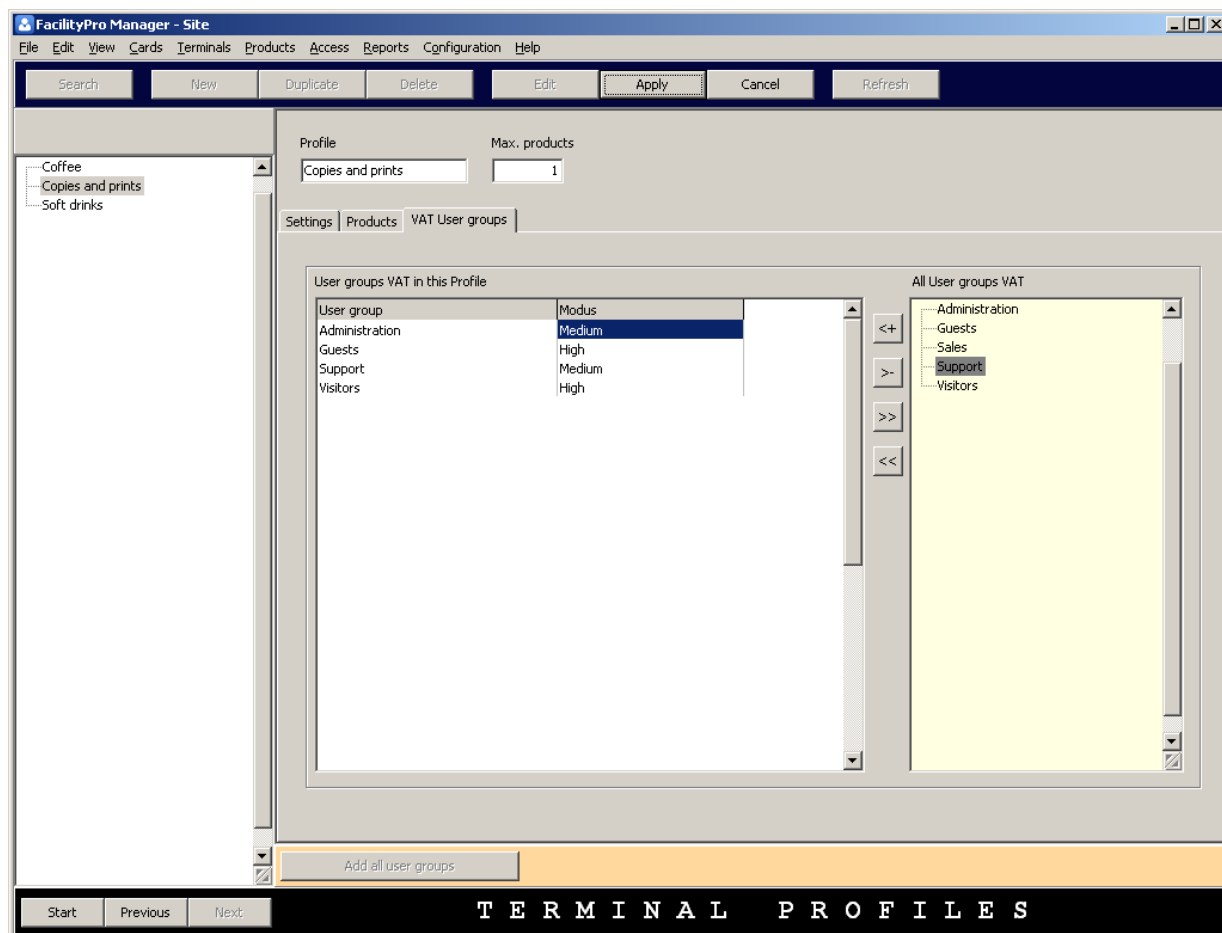
Figure 5-3 The tab 'VAT User groups' of the terminal profiles data screen

How to assign or edit VAT rates to user groups for a specific terminal profile:

1. Choose menu **Products**.
2. Choose **Terminal profiles**.
3. Select the terminal profile for which you want to assign or edit VAT rates to user groups.
4. Click Edit.
5. Click the tab 'VAT User groups'. You will see the tab 'VAT User groups' (Figure 5-3). On the right of the tab you will see a list of user groups known to FacilityPro Manager. On the left, you will see a list (which might be empty) of user groups to which specific VAT rates have previously been assigned for this terminal profile. The order in which user groups are shown in this lift is of no consequence.

6. In the list on the right, select the user group to which you want to assign a specific VAT rate for this terminal profile (unless it is already in the list on the left, in which case go to step 8.

7. Click the arrow <+ to add the selected user group to the list on the left. In the field 'Modus' the value 'VAT of product' will be automatically filled in because by default the VAT rate defined in the field 'VAT%' of the products data screen (§5.2.1) is applied.

8. To change the VAT rate for this user group, click in the field 'Modus' to select it, then click again. A drop-down arrow will appear next to the field. Click on the drop-down arrow and select the desired VAT rate ('Zero', Medium' or 'High').

9. Repeat steps 6 through 8 to assign VAT rates to more user groups.

10. If you want to delete a user group from the list on the left, select the user group and click the arrow >- to delete it.

11. If you want to delete user groups from the list on the left, click the arrow >> to delete them all.

12. Click Apply.

13. Click OK. The edited terminal profile will be saved.

5.1.2.2.1 The action button Add all user groups

With this button you can add all the user groups of the site to all the terminal profiles with the default VAT rate. You can then edit the VAT rates for these user groups if you wish, following the instructions in paragraph §5.1.2.2. When you click on the action button you will see the dialog screen shown in Figure 5-4.
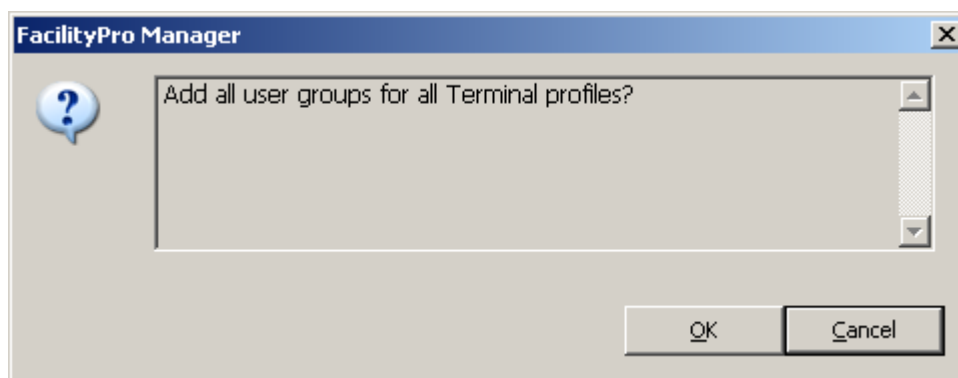
Figure 5-4

5.2 Products

On the products data screen, the record list is a list of all the products available at the various terminals/dispensers on the site. From this screen you can view, create, edit, and delete products.

5.2.1 Creating a product in the database

The fields of the data entry area of the products data screen are listed and explained below. The fields marked * must be assigned a value:

1) Product*: name of the product
2) Product group*: product group to which the product belongs
3) VAT: the VAT rate for this product. The value must be chosen from a drop-down list with three values, which can be defined on the tab 'Terminal configuration' of the site options data screen (§8.1.2.5). If this field has a value, it overrules the value in the field of the same name for the product group the product belongs to. This field can be used to generate reports on the amount of VAT that is due for products sold. If terminal profiles are used on your site (the field 'Terminal profiles' of the tab 'Terminal configuration' of the site options data screen should be checked, §8.1.2.5) and you have assigned a specific VAT rate to a user group (§5.1.2.2 and §8.1.2.5), the VAT rate so assigned will overrule the VAT rate defined in this field when products are sold to card holders of that user group.
4) Terminal display text*: name of the product as shown on the display of the card reader at a terminal, max. 8 characters
5) Price: if no value is filled in (the default value 'n.a.' will be shown) it means the product is for free. If the value of the field 'Number of extra prices' on the tab 'Terminal configuration' of the site options data screen is greater than 0 (§8.1.2.5), you will also see the additional fields 'Price B', 'Price C' etc. each of which can be assigned a value. The value of field 'Price' is used when a transaction is effected, unless the transaction is effected and registered against a 'Price group' right (§5.4.1.5), in which case one of the extra prices is used.

How to create a product:

Note: To create a product the product group the product belongs to must exist in the database.

1. Choose menu **Products**.
2. Choose **Products**. You will see the products data screen (Figure 5-5).
3. Click New.
4. Edit the fields 'Product', 'Product group' and 'Terminal display text' and any other fields of the data entry area that you want to fill in (§2.1.2.4).
5. Click Apply.
6. Click OK. The new product will be saved. The record list will include the name of this new product.

MAGNA CARTA
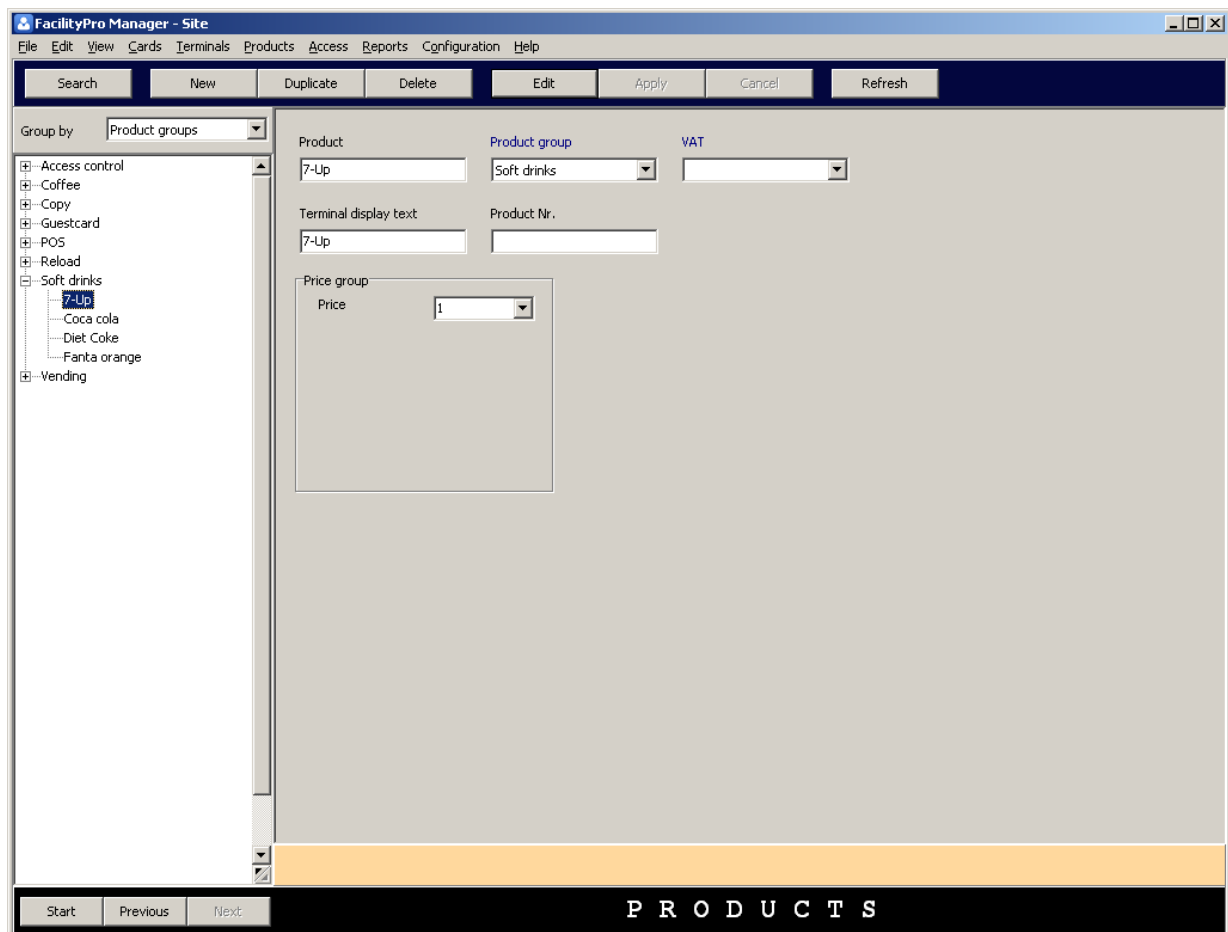
Figure 5-5 The products data screen

5.3 Product groups

Careful thought must be given as to which product groups one wants to define, as rights are assigned to user groups per product group, and not per individual product.

5.3.1 Creating a product group in the database

The fields of the data entry area of the product groups data screen are listed and explained below. The fields marked * must be assigned a value:

1) Product group*: the name of the product group
2) VAT: the VAT rate for products of this product group. The value must be chosen from a drop-down list with three values, which can be defined on the tab 'Terminal configuration' of the site options data screen (§8.1.2.5). If the field of the same name on the products data screen has a value, it overrules the value in this field. The field 'VAT' can be used to generate reports on the amount of VAT that is due for products sold. If terminal profiles are used on your site (the field 'Terminal profiles' of the tab 'Terminal configuration' of the site options data screen should be checked, §8.1.2.5) and you have assigned a specific VAT rate to a user group (§5.1.2.2 and §8.1.2.5), the

VAT rate so assigned will overrule the VAT rate defined in this field when products are sold to card holders of that user group.

How to create a product group:

1. Choose menu **Products**.
2. Choose **Product groups**. You will see the product groups data screen (Figure 5-6).
3. Click New.
4. Edit the field 'Product group' and the field 'VAT' if you wish.
5. Click Apply.
6. Click OK. The new product group will be saved. The record list will include the name of this new product group.
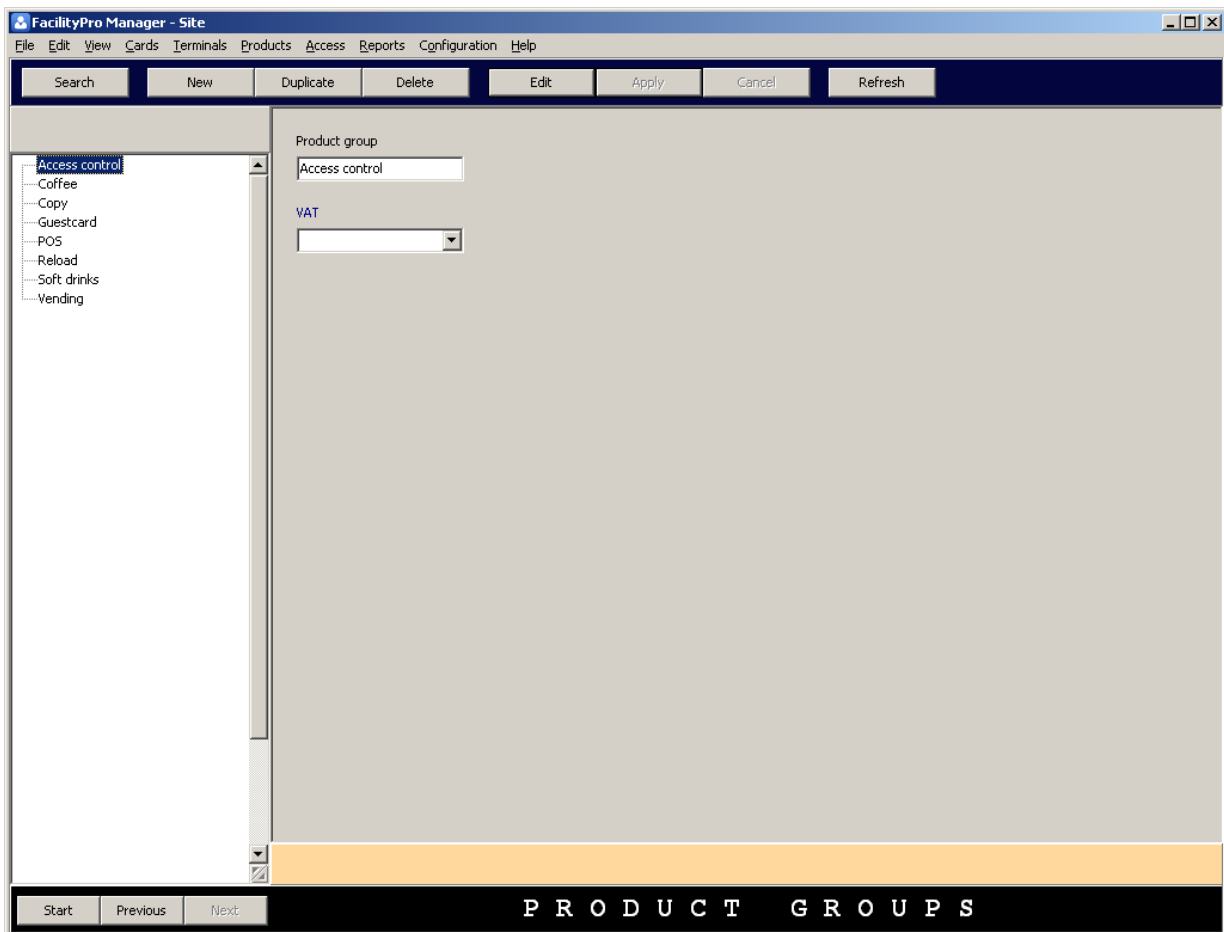
Figure 5-6 The product groups data screen

5.4 Rights

Rights are always assigned to (one or several) user groups. There are three kinds of rights:

1) Right to products: a right to obtain the products of certain product groups for free or for a price different to the standard price. This kind of right is sub-divided into five kinds of rights:
   a) discount, e.g. 'five free coffee (or another product of the same product group) per day' or '50% discount on all copies made'
   b) subsidy, e.g. '£5 daily subsidy for lunch in the canteen'
   c) penalty, e.g. '10% surplus to be paid on all products from the vending machines'
   d) reduction, e.g. 'A £0.10 reduction on all products from the vending machines'
   e) price group: a right to obtain the products of certain product groups for the price defined for that product in field 'Price B' or 'Price C' etc. This type of right is only relevant if the value of the field 'Number of extra prices' on the tab 'Terminal configuration' of the site options data screen is greater than 0 (§8.1.2.5). NB: when transactions are effected and registered against a 'Price group' right, the difference between the default price (Price A) for the product purchased and the price charged (defined in field 'Price B' or 'Price C' etc) is considered a discount and shown as the 'token amount' in the reports.
2) Right to terminals: a right to use certain terminals.
3) Autoload right: the Autoload Server (ALS) module of FacilityPro Manager allows cards to be automatically reloaded when inserted into a networked FacilityPro payment terminal in accordance with a credit amount stored for that card in a file that generated by an external administration system on the back-office computer. The amount can be different for each card or cardholder. Cards will only be automatically reloaded in this way if a right of type 'Autoload' has been created and assigned to the user group the card belongs to. This type of right is only relevant if the ALS server has been installed.

An example of a right to products (type discount) might be 'five free coffee (or another product of the same product group) per day'. If we want to assign this right to all card holders of the user groups PERS-LA and PERS-OTHER, we must first create the right and then assign it to those user groups (§3.4.2.1). A card holder of one of those user groups can then get his free coffee (100% discount) at any of the terminals that dispense coffee.

A right to use a certain terminal would be created if one wanted to reserve a terminal for use by (one or several) specific user groups only. One might want to place a photocopier outside the staff room that only lecturers and administrative personnel may use. We must first create the right to use that terminal and then assign it to that user group (PERS-LA). We will also have to check the field 'Right needed to use terminal' for that terminal (§4.1.1), so that that terminal will only accept card holders of user groups that have been assigned that right.

Rights can be 'one-time only' rights or they can be rights that preset, for instance every day, every week of every month.

Rights are implemented through the use of tokens on the cards. Each card had a number of tokens. When a card is personalised the tokens are written on the card. These tokens can be linked to rights. The database contains the information about which rights are linked to which token for each user group. A terminal reads the tokens on the card and knows which rights they represent (this is a part of its configuration). When a new user group is defined,

FacilityPro Manager automatically creates empty tokens in the database (as many as will fit on the card) for this user group. When a new right is assigned to a user group, it is linked to a specific token of that user group. The changed configuration is sent to the terminals. The token on the cards of that user group that at first carried no meaning (empty), now indicates that the right is valid for that card. Tokens can be interpreted as extra e-purses on the card, containing an amount of purchases (discount) or an amount of money (subsidy), both of which can be definite or indefinite and can be topped up regularly using a preset timetable as explained in this chapter. It is possible to load tokens with a variable amount per card holder, for one card holder at a time using the PIM module of FacilityPro Manager (if the PIM server has been installed). The administrator enters the amount (of purchases or money) that should be written in the token. It is also possible to load tokens with a variable amount per card holder, for many or all card holders at a time by importing data into the ALS module of FacilityPro Manager (if the ALS server has been installed). Both using PIM and ALS, when a card is inserted at a terminal, the appropriate amount (of purchases or money) will be loaded into the token on the card. The right that is linked to that token will define for which products the token can be used. In this way rights and tokens can be used to import older applications into the FacilityPro system during a period of migration.

On the rights data screen, the record list is a list of all the rights that have been defined. From this screen you can view, create, edit, and delete rights.

The tabs of the rights data screen
The rights data screen has the tabs 'Settings', 'Product groups' and 'Terminals'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a right can be viewed or edited.
Above the tabs, at the top of the data entry area of the rights data screen is one field: 'Right'. This field is therefore visible whichever is the active tab.
The tab 'Settings' contains the basic data of a right, and is discussed in §5.4.1.
You will use the tab 'Product groups' only for the first kind of right described above, rights to products. On the tab 'Product groups', you will define which products groups the right pertains to. Instructions on how to do this can be found in §5.4.2.1.
You will use the tab 'Terminals' only for the second kind of right described above, rights to terminals. This tab will therefore only be visible on the screen if the selected right is a right to terminals (if the check-box field 'Right to use terminals' of the right is checked). On the tab 'Terminals' you will define which terminals the right pertains to. Instructions on how to do this can be found in §5.4.2.2.

In order to better understand the use of rights, we will consider some examples and refer back to them in the instructions that follow for creating the different types of rights:

1) <free coffee>, should be assigned to all personnel (user groups PERS-LA and PERS-OTHER). This will be a discount right (§5.4.1.1), and will in effect give the right to 5 free cups of coffee (or other product of the same product group) per day.
2) <free copies>, should be assigned to lecturers and administrative personnel only, therefore to the user group PERS-LA. This will be a discount right (§5.4.1.1).
3) <25% surcharge> for guests, should be assigned to user group GUEST. This will be a penalty right (§5.4.1.3).

4) <free coffee, beverages and lunch> for official guests, should be assigned to user group OFFICIAL. We will choose to limit the total in money-value that each official guest may obtain for free, making it a subsidy right (§5.4.1.2).

5) <right to use photocopier 2>, should be assigned to lecturers and administrative personnel only, therefore to the user group PERS-LA. This will be a right to terminals (§5.4.1.4).

5.4.1 Creating a right in the database

Which fields are shown in the data entry area of the rights data screen (when the tab 'Settings' is active) depends on the value of the field 'Right'. They are listed and explained below:

1) Right: The name of the right. We recommend using a name that describes the properties of that right.

2) Type: This field can have one of the following values (which can be chosen from a drop-down list):

   a) Discount: allows for the products of the product groups defined on the tab 'Product groups' to be obtained for free or for a price lower by a percentage than the standard price.

   b) Subsidy: allows for the products of the product groups defined on the tab 'Product groups' to be obtained for free up to a maximum subsidy amount.

   c) Penalty: defines that the products of the product groups defined on the tab 'Product groups' can only be obtained for a price higher by a percentage than the standard price.

   d) Reduction: defines that the products of the product groups defined on the tab 'Product groups' can be obtained for a price reduced with the value of the field 'Reduction'.

   e) Price group: allows for the products of the product groups defined on the tab 'Product groups' to be obtained for a the price defined in the field 'Price group' (Price B, Price C, etc). Such rights should only be defined if the value of the field 'Number of extra prices' on the tab 'Terminal configuration' of the site options data screen is greater than 0 (§8.1.2.5).

   f) Autoload: allows the cards of the user groups to which the right is assigned to reload their card at autoload terminals. Such a rights should only be defined if the Autoload module has been installed.

3) Discount (%): The percentage of the discount (%) offered by a discount right. A value of 100% makes the products free. This field is only available for rights of type 'Discount'.

4) Penalty (%): The percentage of penalty (%) defined by a penalty right. The price of the products will be augmented by this percentage for card holders of user groups to which this right has been assigned. This field is only available for rights of type 'Penalty'.

5) Reduction: The amount that will be subtracted from the price of products. This field is only available for rights of type 'Reduction'.

6) Price group: Defines which prices will be charged for the products. The values that can be defined in this field (which can be chosen from a drop-down list) are 'Price B', 'Price

C', Price 'D' and Price 'E' irrespective of the value of the field 'Number of extra prices' on the tab 'Terminal configuration' of the site options data screen (§8.1.2.5). Be careful to choose a price group for which the prices of products have been defined. This field is only available for rights of type 'Discount', 'Subsidy' and 'Price group'. In the case of a discount right the discount is given on the price of the price group defined here, and the difference between that price and the price charged is considered a discount and shown as the 'token amount' in the reports. In the case of a subsidy right the price of the price group defined here is subtracted from the remaining subsidy on the card, and that price is considered a discount and shown as the 'token amount' in the reports.. In the case of a 'price group' right the price defined here is charged without further reduction, and the difference between the default price (Price A) and the price charged is considered a discount and shown as the 'token amount' in the reports.

7) Preset value (for rights of type 'Discount', 'Penalty', 'Reduction' and 'Price group'): the number of transactions that can be effected against this right. For rights that preset: the number of transactions that can be effected against this right per preset period (the period defined in the field 'Preset timetable').

8) Subsidy (for rights of type 'Subsidy'): the amount of money for which products can be obtained for free. For rights that preset: the amount of money for which products can be obtained for free per preset period (the period defined in the field 'Preset timetable').

9) Max. value:

   a) for rights of type 'Discount', 'Penalty', 'Reduction' and 'Price group' that preset: the maximum number of transactions that can be effected against this right at any given moment. This field controls whether a number of times can be carried over to the next preset period. After each preset period the counter (keeping track of the number of times) will be increased with the value of the field 'Preset value', unless the value in the field 'Max. value' is then exceeded.

   b) for rights of type 'Subsidy' that preset: the maximum amount of money for which products can be obtained for free at any given moment. This field controls whether unused subsidy can be carried over to the next preset period. After each preset period, the counter (keeping track of the amount of subsidy still available) will be increased with the value of the field 'Subsidy', unless the value in the field 'Max. value' is then exceeded.

10) Preset timetable (for rights that should preset): a timetable (which can be chosen from a drop-down list) defining a period after which the right defined (types 'Discount', 'Subsidy', 'Penalty', 'Reduction' and 'Price group') is repeated (preset), using the value of the field 'Preset value' or 'Subsidy'. Only timetables for which the field 'For presetting a right' has been checked can be chosen in this field. If the field 'Preset timetable' has no value, the right will not be repetitive.

11) Start preset (for rights of type 'Discount', 'Subsidy', 'Penalty', 'Reduction' and 'Price group'): the initial value for the preset counter when the right is first activated (usually the same value as the field 'Preset value').

12) Valid timetable: A timetable (which can be chosen from a drop-down list) defining when the right is valid. If this field has no value, the right is always valid.

13) Right to use terminals: This check-box will be checked if this is the kind of right that gives the right to use certain terminals. Each terminal has a check-box field 'Right

needed to use terminal'. When this check-box is checked (§4.1.1) cards will be refused by the terminal, unless a right for the use of this terminal has been created, with the check-box 'Right to use terminals' checked, and has been assigned to the user group of the card holder of the card.

14) Transparent: If this check-box is checked, the card holder can still obtain the products of the product groups defined on the tab 'Product groups' after the value of the token-counter on his card has decreased to zero, however without the right associated with this token. The price charged will be the price defined in price group A, and without discount, subsidy, penalty, reduction and this price will be deducted from the card balance. At the example site of this manual we will define a right <five free coffee a day>, giving staff the right to 5 free cups of coffee a day. If we make the right transparent, card holders can still get coffee after 5 free cups, for the normal price. If the right is not transparent, the card holder may not obtain any coffee after he has used up all his free cups.

To create a right, fill in the relevant fields. For rights of type 'Discount', 'Subsidy', 'Penalty', 'Reduction' and 'Price group', you will also have to fill in data on the tab 'Product groups' (§5.4.2.1) and for all rights with the field 'Right to use terminals' checked you must fill in data on the tab 'Terminals' (§5.4.2.2).

Separate instructions follow for creating the various different types of rights:
1) the right to obtain the products of certain product groups with a discount (§5.4.1.1)
2) the right to obtain the products of certain product groups with a subsidy (§5.4.1.2)
3) the right to obtain the products of certain product groups with a penalty (§5.4.1.3)
4) the right to obtain the products of certain product groups with a reduction (§5.4.1.4)
5) the right to obtain the products of certain product groups for the price defined in a price group other than the default price group (price group A) (§5.4.1.5)
6) a right of type 'Autoload' (§5.4.1.6)
7) the right to use certain terminals (§5.4.1.7)

Note: In order to save memory space on the cards, one may sometimes decide to create a right to products (discount, subsidy, penalty, reduction or price group), which is at the same time a right to terminals. Such a right would be represented by only one token on a card. We advise creating separate rights for reasons of clarity (needing two tokens on the cards), but the instructions below do explain how to create such combination rights also.

5.4.1.1 Creating a discount right

We recommend limiting the amount of times a discount will be granted, to avoid severe financial loss in the case of lost and stolen cards.
In our example site, the right <five free coffee a day> could be realised by granting 5 cups of free coffee every day, and specifying that a maximum of 15 free cups may be granted at any given moment, to limit the amount of save-up in case the card holder drinks less than

5 coffee a day. If the card is stolen, the card will soon be on the hotlist (§3.1.3.7) and will be blocked the next time it is used, but in the meantime, the maximum loss by abuse of the right to free coffee will be limited.

How to create a 'discount' type of right:

Note: To create a right the appropriate timetables (if any) must exist in the database.

1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Click in the field **'Right'**.
5. Type the name of the new right. The default value for the field 'Type' is 'Discount' so that there is no need to edit this field.
6. Click in the field 'Discount (%)'.
7. Type the percentage of discount. The value **'100'** will result in free products.
8. If you want the discount to be applied to the price defined in a price group other than the default price group (price group A), click the arrow next to the field **'Price group'** and select the desired price group.
9. If you want to limit the number of times that the discount will be granted, double-click in the field 'Preset value' and type the number of times you want the discount to be granted, whether on a one-time basis, or per preset period defined in the field 'Preset timetable'.
10. If you want the number of times the discount will be granted when the right first becomes active to be different from the value entered in the previous step, double-click in the field 'Start preset' and type the desired value (if you do not fill in this field, it will be given a value equal to 'Preset value').
11. If you want to limit the number of times the discount will be granted at any given moment, click in the field 'Max. value' and type the desired maximum value (if you do not fill in this field, it will be given a value equal to 'Preset value').
12. If you want the right to be repetitive, i.e. if you want the right to preset each time a certain period has passed, click the arrow next to the field 'Preset timetable' and select the applicable timetable.
13. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
14. If you have entered a value in the field 'Preset value' and/or the field 'Start preset' and you wish the products still to be available without discount after the number of times the discount may be granted has reduced to zero, click in the check-box 'Transparent' to check it.
15. If you want this right to give the user groups to which it is assigned the right to use certain terminals, as well as giving them the right to the discount defined in the previous steps, click in the check-box 'Right to use terminals' to check it.
16. Click Apply.

Figure 5-7 The tab 'Settings' of the rights data screen

17. Click OK. The new right will be saved. The record list will include the name of this new right. You must still define to which product groups the right pertains. Instructions on how to do this can be found in §5.4.2.1. If you have checked the check-box 'Right to use terminals' you must also define to which terminals the right pertains (§5.4.2.2). You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.1.2 Creating a subsidy right

We recommend limiting the amount of subsidy that will be granted, to avoid severe financial loss in the case of lost and stolen cards.
In our example site, the right <free coffee, beverages and lunch> for official guests could be realised by granting a subsidy of Euro 20 per day for all appropriate product groups every day, and specifying that a maximum subsidy of Euro 30 may be granted at any given moment, to limit the amount of save-up in case the card holder consumes less than the Euro 20 a day. If the card is stolen, the card will soon be on the hotlist and will be blocked the next time it is used, but in the meantime, the maximum loss by abuse of the right will be limited.

How to create a 'subsidy' type of right:

Note: To create a right the appropriate timetables (if any) must exist in the database.

---

1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Click in the field 'Right'.
5. Type the name of the new right.
6. Click the arrow next to the field 'Type' and select the type 'Subsidy'.
7. If you want the price to be charged to be the price defined in a price group other than the default price group (price group A), click the arrow next to the field 'Price group' and select the desired price group.
8. Click in the field 'Subsidy'.
9. Type the amount of subsidy you want to be granted, whether on a one-time basis, or per preset period defined in the field 'Preset timetable'.
10. If you want the amount of subsidy that will be granted when the right first becomes active to be different from the value entered in the previous step, double-click in the field 'Start preset' and type the desired value (if you do not fill in this field, it will be given a value equal to 'Subsidy').
11. If you want to limit the amount of subsidy that will be granted at any given moment, click in the field 'Max. value' and type the desired maximum value (if you do not fill in this field, it will be given a value equal to 'Subsidy').
12. If you want the right to be repetitive, i.e. if you want the right to preset each time a certain period has passed, click the arrow next to the field 'Preset timetable' and select the applicable timetable.
13. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
14. If you want the products still to be available against payment after the amount of subsidy has reduced to zero, click in the check-box 'Transparent' to check it.
15. If you want this right to give the user groups to which it is assigned the right to use certain terminals, as well as giving them the right to the subsidy defined in the previous steps, click in the check-box 'Right to use terminals' to check it.
16. Click Apply.
17. Click OK. The new right will be saved. The record list will include the name of this new right. You must still define to which product groups the right pertains. Instructions on how to do this can be found in §5.4.2.1. If you have checked the check-box 'Right to use terminals' you must also define to which terminals the right pertains (§5.4.2.2). You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.1.3 Creating a penalty right

How to create a 'penalty' type of right:

Note: To create a right the appropriate timetables (if any) must exist in the database.

1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will

normally be active by default, if another tab is active, click the tab 'Settings'.)

3. Click New.
4. Click in the field **'**Right**'**.
5. Type the name of the new right.
6. Click the arrow next to the field 'Type**'** and select the type 'Penalty'.
7. Click in the field 'Penalty amount (%)'.
8. Type the percentage of the penalty.
9. If you want to limit the number of times that the penalty will be applied, double-click in the field 'Preset value' and type the number of times you want the penalty to be applied, whether on a one-time basis, or per preset period defined in the field 'Preset timetable'.
10. If you want the number of times the penalty will be applied when the right first becomes active to be different from the value entered in the previous step, double-click in the field 'Start preset' and type the desired value (if you do not fill in this field, it will be given a value equal to 'Preset value').
11. If you want to limit the number of times the penalty will be applied at any given moment, click in the field 'Max. value' and type the desired maximum value (if you do not fill in this field, it will be given a value equal to 'Preset value').
12. If you want the right to be repetitive, i.e. if you want the right to preset each time a certain period has passed, click the arrow next to the field 'Preset timetable' and select the applicable timetable.
13. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
14. If you have entered a value in the field 'Preset value' and/or the field 'Start preset') and you wish the products still to be available without penalty after the number of times the penalty should be applied has reduced to zero, click in the check-box 'Transparent' to check it.
15. If you want this right to give the user groups to which it is assigned the right to use certain terminals, as well as giving them the penalty defined in the previous steps, click in the check-box 'Right to use terminals' to check it.
16. Click Apply.
17. Click OK. The new right will be saved. The record list will include the name of this new right. You must still define to which product groups the right pertains. Instructions on how to do this can be found in §5.4.2.1. If you have checked the check-box 'Right to use terminals' you must also define to which terminals the right pertains (§5.4.2.2). You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.1.4 *Creating a reduction right*

How to create a 'reduction' type of right:

Note: To create a right the appropriate timetables (if any) must exist in the database.

1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)

3. Click New.
4. Click in the field **'**Right**'**.
5. Type the name of the new right.
6. Click the arrow next to the field 'Type**'** and select the type 'Reduction'.
7. Click in the field 'Reduction'.
8. Type amount of reduction you want to be granted (e.g. **1** = £1.00, **0.5** = £0.50).
9. If you want to limit the number of times that the reduction will be applied, double-click in the field 'Preset value' and type the number of times you want the reduction to be applied, whether on a one-time basis, or per preset period defined in the field 'Preset timetable'.
10. If you want the number of times the reduction will be applied when the right first becomes active to be different from the value entered in the previous step, double-click in the field 'Start preset' and type the desired value (if you do not fill in this field, it will be given a value equal to 'Preset value').
11. If you want to limit the number of times the reduction will be applied at any given moment, click in the field 'Max. value' and type the desired maximum value (if you do not fill in this field, it will be given a value equal to 'Preset value').
12. If you want the right to be repetitive, i.e. if you want the right to preset each time a certain period has passed, click the arrow next to the field 'Preset timetable' and select the applicable timetable.
13. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
14. If you have entered a value in the field 'Preset value' and/or the field 'Start preset') and you wish the products still to be available without reduction after the number of times the reduction should be applied has reduced to zero, click in the check-box 'Transparent' to check it.
15. If you want this right to give the user groups to which it is assigned the right to use certain terminals, as well as giving them the reduction defined in the previous steps, click in the check-box 'Right to use terminals' to check it.
16. Click Apply.
17. Click OK. The new right will be saved. The record list will include the name of this new right. You must still define to which product groups the right pertains. Instructions on how to do this can be found in §5.4.2.1. If you have checked the check-box 'Right to use terminals' you must also define to which terminals the right pertains (§5.4.2.2). You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.1.5 *Creating a price group right*

A price group right (e.g. 'Right to price group B') is assigned to certain user groups if one or several products on site have more than one price (the field 'Number of extra prices' on the tab 'Terminal configuration' of the site options data screen has a value greater than 0 (§8.1.2.5)). By assigning the price group right 'Right to price group B' to a user group you determine that cards of that user group will be charged price B for the products of the product groups determined in that right, rather than the standard price.

How to create a 'price group' type of right:

> *Note: To create a right the appropriate timetables (if any) must exist in the database.*

1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Click in the field **'**Right**'**.
5. Type the name of the new right.
6. Click the arrow next to the field 'Type**'** and select the type 'Price group'.
7. Click the arrow next to the field **'**Price group**'** and select the desired price group for this right.
8. If you want to limit the number of times that the right will be applied, double-click in the field 'Preset value' and type the number of times you want the defined price group to be applied, whether on a one-time basis, or per period defined in the field 'Preset timetable'.
9. If you want the number of times the right will be applied when the right first becomes active to be different from the value entered in the previous step, double-click in the field 'Start preset' and type the desired value (if you do not fill in this field, it will be given a value equal to 'Preset value').
10. If you want to limit the number of times the right will be applied at any given moment, click in the field 'Max. value' and type the desired maximum value (if you do not fill in this field, it will be given a value equal to 'Preset value').
11. If you want the right to be repetitive, i.e. if you want the right to preset each time a certain period has passed, click the arrow next to the field 'Preset timetable' and select the applicable timetable.
12. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
13. If you have entered a value in the field 'Preset value' and/or the field 'Start preset') and you wish the products still to be available for the price defined in Price group A after the number of times the right should be applied has reduced to zero, click in the check-box 'Transparent' to check it.
14. If you want this right to give the user groups to which it is assigned the right to use certain terminals, as well as giving them the price group defined in the previous steps, click in the check-box 'Right to use terminals' to check it.
15. Click Apply.
16. Click OK. The new right will be saved. The record list will include the name of this new right. You must still define to which product groups the right pertains. Instructions on how to do this can be found in §5.4.2.1. If you have checked the check-box 'Right to use terminals' you must also define to which terminals the right pertains (§5.4.2.2). You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.1.6 Creating an autoload right

How to create an 'autoload' type of right:

Note: To create a right the appropriate timetables (if any) must exist in the database.

1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Click in the field **'Right'**.
5. Type the name of the new right.
6. Click the arrow next to the field 'Type**'** and select the type 'Autoload'.
7. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
8. If you want this right to give the user groups to which it is assigned the right to use certain terminals, as well as giving them the autoload right, click in the check-box 'Right to use terminals' to check it.
9. Click Apply.
10. Click OK. The new right will be saved. The record list will include the name of this new right. If you have checked the check-box 'Right to use terminals' you must also define to which terminals the right pertains (§5.4.2.2). You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.1.7 Creating a right to use certain terminals

A right to use certain terminals is best created by defining a discount type of right that gives a discount of 0%, and checking the check-box field 'Right to use terminals'.
In order to save memory space on the cards, one may sometimes decide to create rights that are a discount, subsidy, penalty, reduction, price group or autoload type of right, but at the same time are a right to use certain terminals. If you want to create such a combination right you must do so following the instructions for creating such rights in the previous paragraphs. This paragraph gives instructions for creating a right that only gives the right to use certain terminals, and does not give a discount, subsidy, penalty, reduction, price group or autoload right.

How to create a right which only grants access to certain terminals:

Note: To create a right the appropriate timetables (if any) must exist in the database.
1. Choose menu **Products**.
2. Choose **Rights**. You will see the rights data screen (Figure 5-7). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click New.
4. Click in the field **'Right'**.
5. Type the name of the new right.
6. Click in the field 'Discount (%)'.
7. Type the value **'0'** as this right will not actually give any discount.

8. If the right should be valid only during certain periods, click the arrow next to the field 'Valid timetable' and select the applicable timetable.
9. Click in the check-box 'Right to use terminals' to check it.
10. Click Apply.
11. Click OK. The new right will be saved. The record list will include the name of this new right. You must still define to which terminals the right pertains. Instructions on how to do this can be found in §5.4.2.2. You should assign this right to the appropriate user groups on the tab 'Rights' of the user groups data screen (§3.4.2.1).

5.4.2 The tabs of the rights data screen

Apart from the tab 'Settings' of the rights data screen, there are two other tabs, the use of which is described in the following paragraphs.

5.4.2.1 The tab 'Product groups'

If you have created a right to obtain the products of certain product groups for free or for a price different to the standard price (a discount right, a subsidy right or a penalty right) you must define to which product groups the right pertains. Instructions on how to do this can be found in this paragraph.

How to define to which product groups a right pertains:

Note: To define to which product groups a right pertains the appropriate product groups must exist in the database.

1. Choose menu **Products**.
2. Choose **Rights**.
3. Select the right for which you want to define the product groups it pertains to.
4. Click Edit.
5. Click the tab 'Product groups'. You will see the tab 'Product groups' (Figure 5-8). On the right you will see a list of all the product groups. On the left you will see a list (which might be empty) of the product groups that this right already pertains to.
6. In the list on the right, select a product group to which you want the right to pertain.
7. Click the arrow <+ to add the selected product group to the list of product groups that the right pertains to.
8. Repeat steps 6 through 7 to add more product groups.
9. If you want to delete a product group from the left list, select the product group and click the arrow >- to delete it.
10. If you want to delete all product groups from the left list, click the arrow >> to delete them.
11. Click Apply.
12. Click OK. The edited right will be saved.
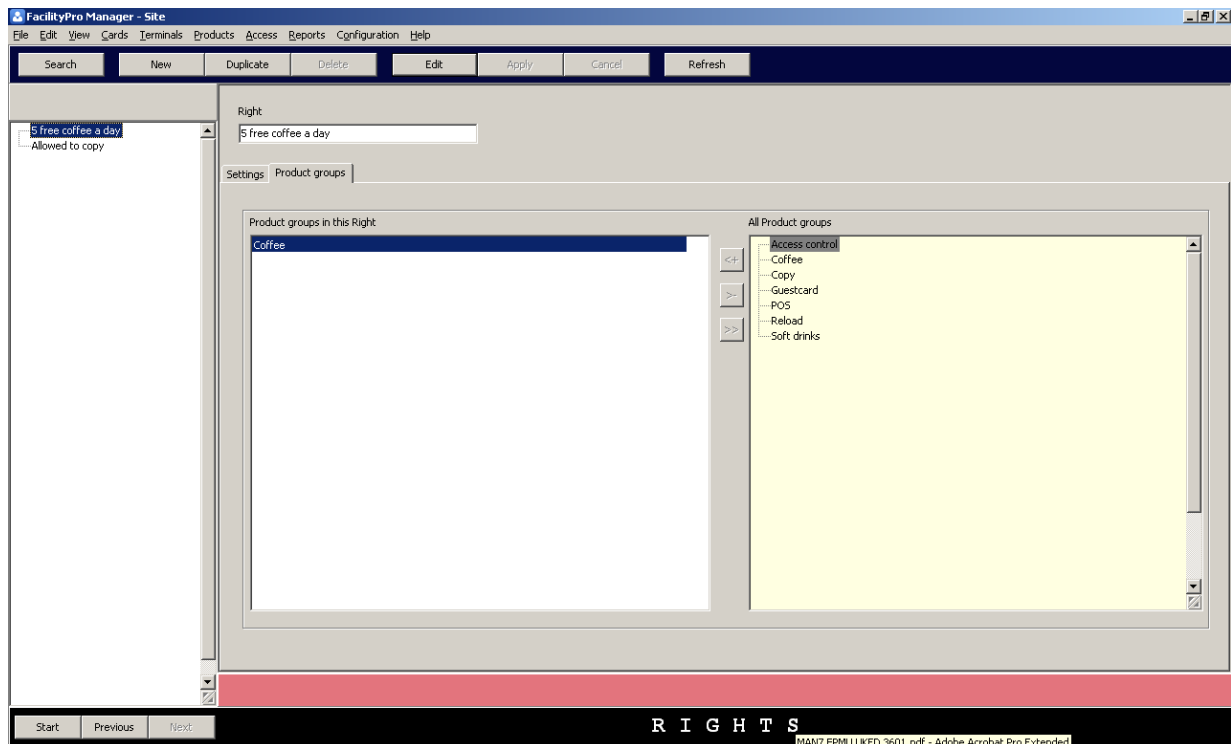
Figure 5-8 The tab 'Product groups' of the rights data screen

5.4.2.2 The tab 'Terminals'

If you have created a right that grants access to certain terminals you must define to which terminals the right pertains. Instructions on how to do this can be found in this paragraph. This tab will only be visible on the screen if the selected right is a right to terminals (if the check-box field 'Right to use terminals' of the right is checked).

<u>**How to define to which terminals a right pertains:**</u>

Note: To define to which terminals a right pertains the appropriate terminals must exist in the database.

1. Choose menu **Products**.
2. Choose **Rights**.
3. Select the right for which you want to determine the terminals it pertains to. This must be a right of which the check-box field 'Right to use terminals' is checked.
4. Click Edit.
5. Click the tab 'Terminals'. You will see the tab 'Terminals' (Figure 5-9). On the right you will see a list of all the terminals, grouped by terminal group. On the left you will see a list (which might be empty) of the terminals that this right already pertains to.
6. If you want the right to pertain to all the terminals in a certain terminal group, select that terminal group in the list on the right and go to step 9.
7. In the list on the right, click the plus sign next to the terminal group of the terminal to which you want the right to pertain. You will see a list of the terminals that belong to this terminal group.

8. Select the terminal to which you want the right to pertain.
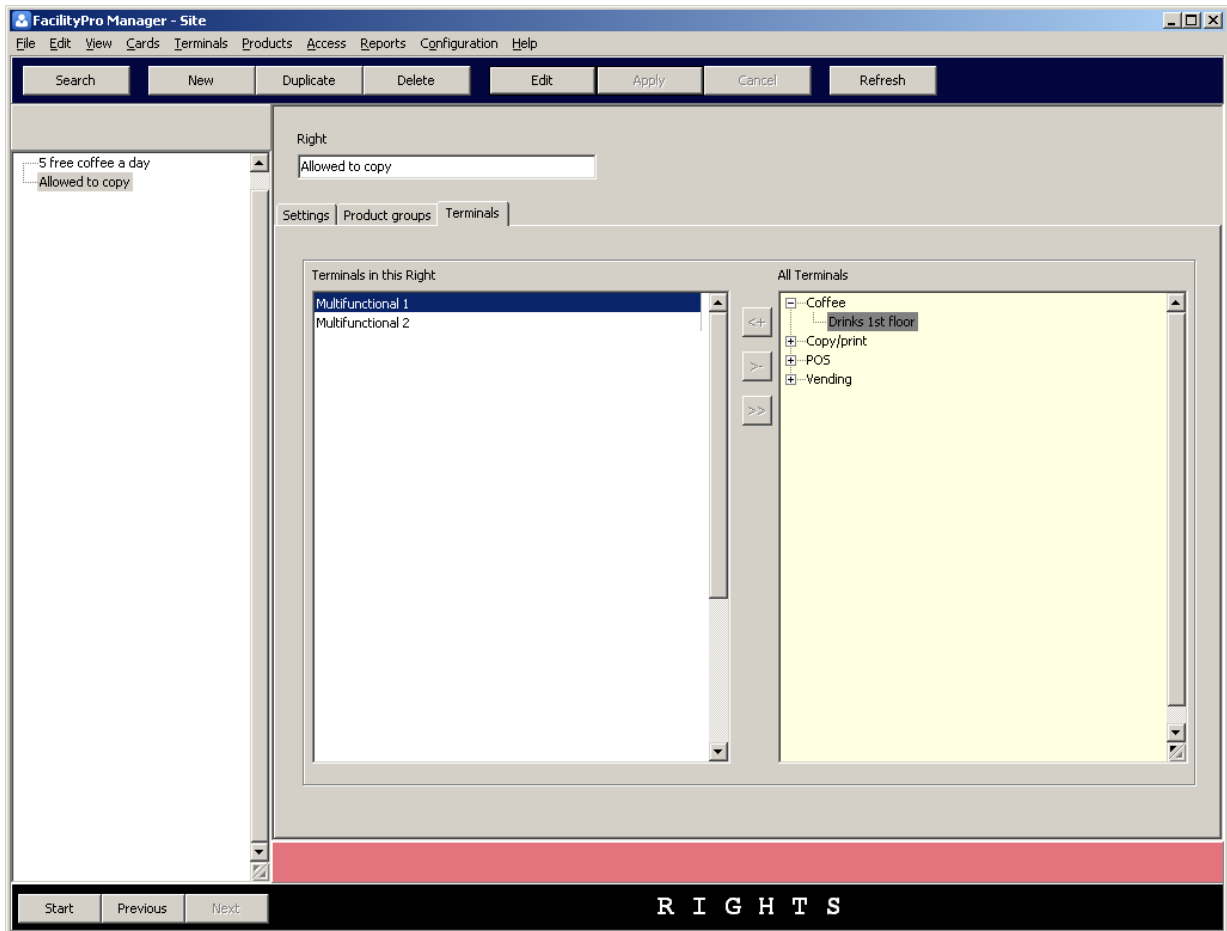
Figure 5-9 The tab 'Terminals' of the rights data screen

9. Click the arrow $\boxed{<+}$ to add the selected terminal(s) to the list of terminals to which the right pertains.
10. Repeat steps 6 through 9 to add more terminals to the list of terminals to which the right pertains.
11. If you want to delete a terminal from the list on the left, select the terminal and click the arrow $\boxed{>-}$ to delete it.
12. If you want to delete all terminals from the list on the left, click the arrow $\boxed{>>}$ to delete them.
13. Click Apply.
14. Click OK. The edited right will be saved.

6 Access

An access terminal is a terminal which is connected to a dispenser that controls access, such as a sliding door.

If there are access terminals on site, these are grouped into zones, whereby the access terminals to each individual physical space form a zone. If, for instance, there are three different points of entry to a parking garage, one would group them to form one zone named 'Access to garage'. Each terminal may only be in one zone.

For each user group or individual card we can define which zones the cards of that user group or that card may enter and at which times. This is done by defining access groups. An access group is a list of zones, with (optionally) a timetable for each zone to restrict the times at which the zone may be entered. More about timetables can be found in §8.5.

The access terminals receive as a part of their configuration a list of all the card numbers that can be granted access at that access terminal, and at which times, which we call the access list for that access terminal.

Let us consider an example:

If you have 3 access terminals to the parking area, two to the university building, and one for the server room, you might define three zones and three access groups:

Zone	Terminals
Parking	Parking 1, Parking 2, Parking 3
Building	Front door, Side door
Server room	Server room

Access group	Zones	Timetables
Top level access	Parking	Always
	Building	Always
	Server room	Always
Staff	Parking	From 7 am to 8 pm
	Building	From 7 am to 8 pm
Students	Building	From 8 am to 7 pm weekdays only

Subsequently you might assign the access groups as follows:

Access group	User groups	Cards
Top level access		ICT specialist's cards
Staff	PERS-LA	
	PERS-OTHER	
Students	STUDENT	

6.1 Zones

A zone is a group of one or more access terminals which grant access to a certain area.

On the zones data screen, the record list is a list of all the zones that have been defined. From this screen you can view, create, edit, and delete zones.

6.1.1 Creating a zone in the database

To create a zone you must give the field 'Zone' a value and define which access terminals are in that zone.

How to create a zone:

Note: To create a zone the appropriate access terminals must exist in the database.

1. Choose menu **Access**.
2. Choose **Zones**. You will see the zones data screen (Figure 6-1). On the right you will see a list of all the access terminals that have not yet been included in a zone, and can therefore be added to the selected zone. On the left you will see a list (which might be empty) of the access terminals that have been included in the selected zone.
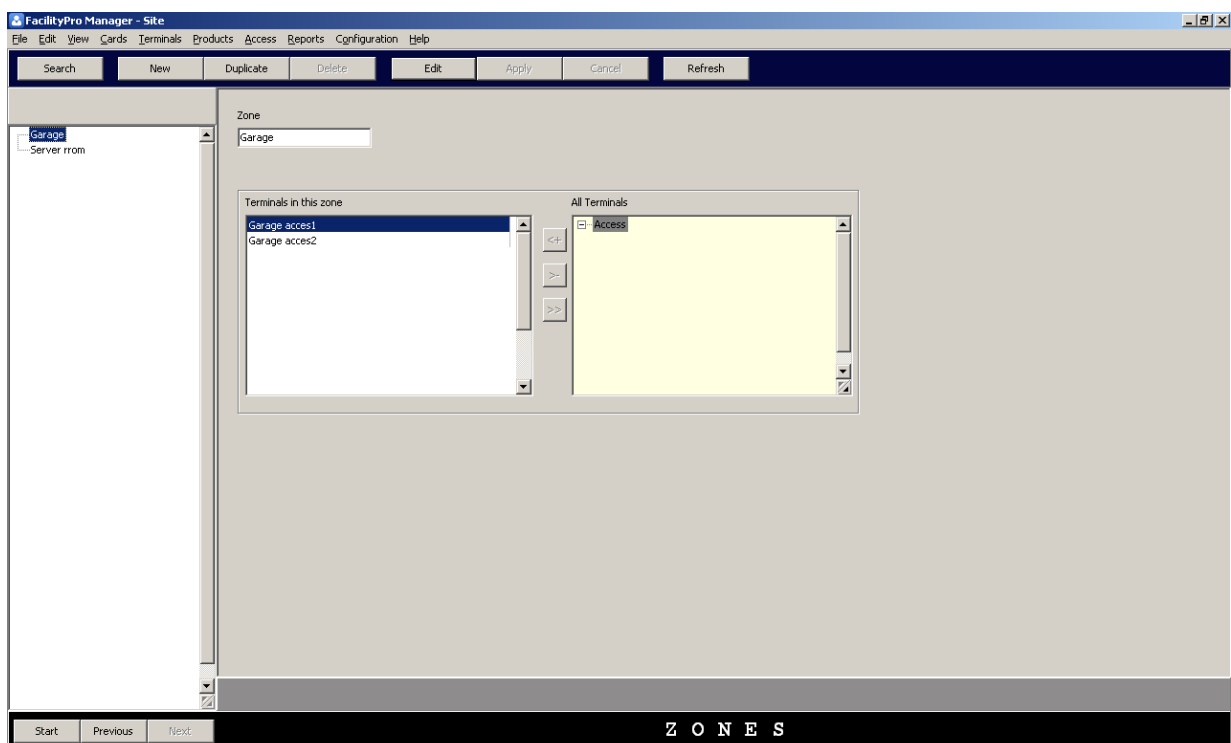
Figure 6-1 The zones data screen

3. Click New.
4. Click in the field **'Zone'**.
5. Type the name of the new zone.
6. In the right list, click the access terminal you want to include in the new zone.

---

7. Click the arrow <+ to include the selected access terminal (it will appear in the left list).
8. Repeat steps 6 through 7 for each access terminal you want to include in the new zone.
9. Click Apply.
10. Click OK. The new zone will be saved. The record list will include the name of this new zone.

6.2   Access groups

An access group is a group of one or more zones to which you want to grant access to certain cards. For each zone in the access group you can optionally define a timetable to restrict the hours that access is allowed. By assigning an access group to a card (§3.1.2.3), we grant the card holder of that card the right to gain access at all the access terminals of all the zones in that access group, as the card number is added to the access list of each of those access terminals (with the applicable timetables). By assigning an access group to a user group (§3.4.2.3), we grant the card holders of all the cards that are subsequently created for that user group the right to gain access at all the access terminals of all the zones of that access group, as those card numbers are added to the access list of each of those access terminals (with the applicable timetables).

On the tab 'Access' of the terminals data screen you can define a period during which that access terminal is unlocked, i.e. one can gain access without a card (§4.1.2.2).

On the access groups data screen, the record list is a list of all the access groups that have been defined. From this screen you can view, create, edit, and delete access groups.

6.2.1   Creating an access group in the database

To create an access group you must give the field 'Access group' a value and define which zones are in that access group and which timetable (if any) applies to that zone for this access group.

How to create an access group:

Note: To create an access group the appropriate zones and timetables must exist in the database.

1. Choose menu **Access**.
2. Choose **Access groups**. You will see the access groups data screen (Figure 6-2). On the right you will see a list of all the zones in the database. On the left you will see a list (which might be empty) of the zones that have been included in the selected access group, with a column for filling in a timetable for each zone.
3. Click New.
4. Click in the field **'Access group'**.
5. Type the name of the new access group.

6. In the right list, click the zone you want to include in the new access group.
7. Click the arrow <+ to include the selected access terminal (it will appear in the left list).
8. If you want to define a timetable for this zone, click in the field 'Timetable' for this zone to select it, then click again. A drop-down arrow will appear next to the field. Click on the drop-down arrow and select the desired timetable.
9. Repeat steps 6 through 8 for each zone you want to include in the new access group.
10. Click Apply and click OK. The new access group will be saved. The record list will include the name of this new access group.
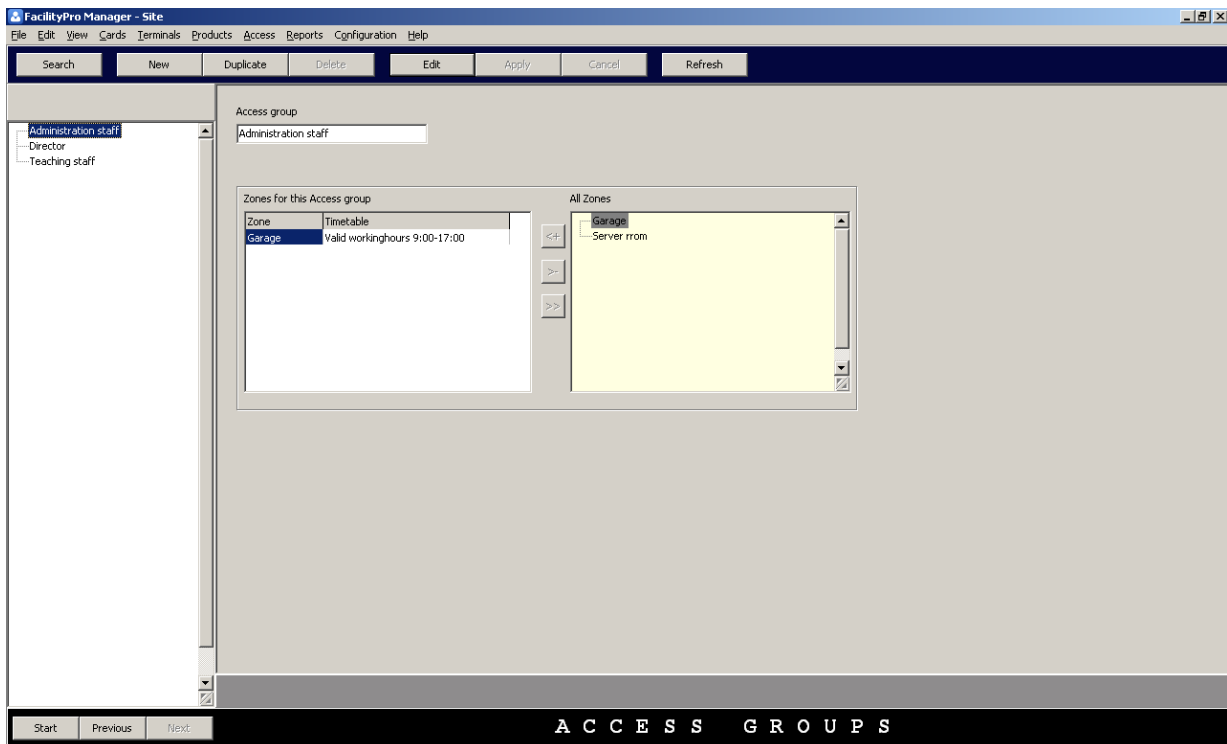
Figure 6-2 The access groups data screen

7   Reports

The software program Report Builder has been integrated into FacilityPro Manager and can be used to generate reports on the data of a site. A large number of standard report templates have been designed by Magna Carta with Report Builder and are supplied with FacilityPro Manager. An overview of these standard report templates is given in §7.3.

The standard report templates are stored in the report table, and new report templates can be designed and entered into this table. On the reports data screen, the record list is a list of all the report templates. From this screen you can view, create, edit, and delete report templates. Using the action buttons of the reports data screen you can view, print and save reports, or load previously saved reports. The reports are divided into report groups. FacilityPro Manager knows the report groups: Cards, Groups, Products, System, Terminals, Transactions and Turnover,. You cannot add, delete or edit report groups. The report group of the selected report template is shown in the field 'Report group' on the reports data screen. By default, the reports are grouped by report group (you can also ungroup the record list, so that you see a complete list of all the report templates, §2.1.2.1).

The tabs of the reports data screen

The reports data screen has the tabs: 'Data selection', 'Reporting options' and 'Report dashboard'.

One of the tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields or settings that relate to reports can be viewed or edited.

Above the tabs, at the top of the data entry area of the cards data screen there are two fields: 'Report name' and 'Report group'. These fields are therefore visible whichever is the active tab.

The tab 'Data selection' allows you to define which data you want to see in a report that you want to generate (§7.1).

The tab 'Reporting options' allows you to define where reports are saved by default, which default time period is used for generating reports and which day is considered the first day of the week (§7.4).

The tab 'Report dashboard' allows you to define a number of reports that are frequently generated for your site, so that administrators that are required to generate reports can be presented with a simple and easy-to-use report dashboard, rather than the more complicated reports data screen (§7.5).

7.1   Generating reports

When you run report templates to generate actual reports, these are based on the data in the database currently in use by FacilityPro Manager. Reports can be generated from the reports data screen or from the report dashboard.

7.1.1 Generating reports from the reports data screen

How to generate a report:

1. Choose menu **Reports**.
2. Choose **Reports**. You will see the reports data screen (Figure 7-1). (The tab 'Data selection' will normally be active by default, if another tab is active, click the tab 'Data selection'.)
3. Select the report template from which you want to generate a report. Depending on the report template chosen, the data entry area might show some fields in which you can enter conditions, through which you define which part of the data from the database is to be used for the report. For instance, you might define which terminal must be reported on in a 'Terminal configurations' report by filling in the field 'Terminal name'. If you do not fill in this field, the report will be generated for all terminals on the site.
4. Insert the necessary conditions in the fields shown if you want to generate a report on only part of the data of the database. If you do not insert any conditions, the report will be generated using only the data of today where the dates can be defined, and using only the data on card number 100001 where the card number can be defined. These defaults have been set to avoid accidental generation of reports on huge amount of data from a large data, which can take considerable time. For details of which conditions can be set for each standard report template see §7.3.
5. Click View to view the report you are generating on screen. You will see a print preview of the report. With the menu buttons at the top of the screen you can view the print preview in different page sizes, go forward or backward a page at a time, go to the first or the last page or a specific page number, or send the report to the printer. To exit the preview mode and return to the reports data screen, click Close.

Figure 7-1 The reports data screen

6. Click Print to print the report you are generating from the reports data screen. You will see a standard Windows print dialog screen, where you can define which pages of the report to print, which printer to use, the print quality, etc., before sending the report to the printer by clicking on OK.

7. Click Archive to save the report you are generating in a file. You will see the message 'Save report in archive?'. Click Yes. You will see a standard Windows 'Save As' dialog screen. You can define the folder and filename in the usual Windows manner. By default, the folder is the folder specified in the field 'Reports folder' on the tab 'Reporting options' of the reports data screen and the file name is the report template name followed by the date. In the field 'Save as type' you can choose between 'Text file (*.csv)' and 'Adobe PDF file (*.pdf)'. Click Save. The report will be saved. You will return to the reports data screen.

8. Repeat steps 3 through 7 if you would like to generate other reports.

7.1.2 Generating reports from the report dashboard

An administrator can only generate reports from the report dashboard if the administrator group he/she belongs to has the authorisation level 'Visible' for the report dashboard (§8.3.1).

How to generate a report:

1. Click the button 'Reports' on the opening screen of FacilityPro Manager (Figure 2-2). You will see the report dashboard (Figure 7-3).
2. Click the report you want to generate. You will see a print preview of the report.
3. If you want to print the report, click on the printer icon. You will see a standard Windows print dialog screen, where you can define which pages of the report to print, which printer to use, the print quality, etc., before sending the report to the printer by clicking on OK. You will return to the print preview.
4. To exit the preview mode and return to the report dashboard, click Close.
5. Repeat steps 2 through 4 to preview and/or print more reports.
6. Click the Facilitypro Manager icon in the top right-hand corner of the screen and choose 'Close' to exit FacilityPro Manager.

7.2 Designing new report templates

It is possible to create new report templates yourself, if you need to generate reports which cannot be generated from the standard report templates supplied with FacilityPro Manager. For detailed instructions, we refer you to the user manual of the software program Report Builder. It is outside the scope of this user manual to provide complete instructions for creating new report templates with the Report Builder. In this paragraph we include only the basic instructions for creating a new report from the FacilityPro Manager screens. A tutorial for Report Builder is available via mail from your FacilityPro Manager dealer.

Note: to define a new report template with Report Builder, you first have to create an empty report template in the reports table of the FacilityPro Manager database. Working with the Report Builder before saving the new (empty) report template in FacilityPro Manager will not work.

How to create a report template:

1. Choose menu **Reports**.
2. Choose **Reports**.
3. Click New. (If the report template you want to create is similar to an existing report template, you will rather select that report template and click Duplicate to make a duplicate copy, which you will then modify later.)
4. Click in the field 'Report name'.
5. Type the name of the new report template.
6. Click the arrow next to the field 'Report group'.
7. Select the report group of the new report template.
8. Click Apply.
9. Click OK. The new report template (which at this stage is an empty report template or a copy of an existing template, see step 3) will be saved. The record list will include the name of this new report template.
10. Click Edit.
11. Click Design. This opens the Report Builder program.
12. Create the new report template with Report Builder. For more information see your Report Builder user manual.
13. Choose **Save as** from the menu **File** of the Report Builder. You will see a 'Save as' dialog screen.
14. Type the name for the template file for this report template. You must type the same name as you gave to the report template in the reports table of FacilityPro Manager in step 5.
15. Click Save.
16. Click Yes. The report template is saved.
17. Close the report builder. You will return to the reports data screen.
18. Click Apply.
19. Click OK. The new report template record is saved.

Report Builder saves all report templates, both the standard report templates supplied with FacilityPro Manager and any report templates you might create in addition, in the database in a template file. A template file can be viewed from the reports data screen of FacilityPro Manager by clicking in the check-box 'Template' to check it. Clicking the check-box 'Template' again, and thereby un-checking it, will cause the template file to disappear from the reports data screen.

7.3 An overview of the standard report templates

Table 7-1 lists all the standard report templates that are supplied with FacilityPro Manager and with which you can generate standard reports. The table shows the report group to which the report template belongs, its name, a description of the contents of the reports it

generates and a list of the possible conditions that can be set in order to generate reports based on only a part of the data in the database.

The conditions that can be set for some of the reports are:

1) Administrator: the value of the field 'Administrator' of an administrator so that the report will be generated only for that administrator.
2) Amount: you can set a condition on the amount for a PIM command so that only PIM commands for that amount will be shown.
3) Card number: the value of the field 'Card number' of a card so that the report will be generated only for the card with that card number.
4) Card status: the value of the field 'Card status' of a card so that the report will be generated only for cards with that card status.
5) Collection time: you can set a condition on the date and time of the data collection. You can change the beginning or ending date for the condition by clicking the arrow next to the date field. A calendar is opened where you can select the desired beginning or ending date.
6) Connection(s): the beginning characters of the value of the field 'Connection' of a terminal so that the report will be generated only for terminals with certain types of connection.
7) Cost centre: the value of the field 'Cost centre' of a cost centre so that the report will be generated only for that cost centre.
8) Insert date: (PIM) you can set a condition on the date and time that a PIM command was entered. You can change the beginning or ending date for the condition by clicking the arrow next to the date field. A calendar is opened where you can select the desired beginning or ending date.
9) Issue number: the value of the field 'Issue number' of a card so that the report will be generated only for cards with that issue number.
10) Location: the value of the field 'Location' of a terminal so that the report will be generated only for terminals with that location.
11) Machine type: the value of the field 'Machine type' of a terminal so that the report will be generated only for terminals with that machine type.
12) Product(s): the beginning characters of the value of the field 'Product' of a product so that the report will be generated only for products beginning with those characters.
13) Product group: the value of the field 'Product group' of a product group so that the report will be generated only for that product group.
14) Right: the value of the field 'Right' of a right so that the report will be generated only for that right.
15) Terminal group: the value of the field 'Terminal group' of a terminal group so that the report will be generated only for that terminal group.
16) Terminal name: the value of the field 'Terminal name' of a terminal so that the report will be generated only for that terminal.
17) Time/Time stamp: you can set a condition on the date and time of certain fields, such as the date and time of an action, an error, etc. You can change the beginning or ending date for the condition by clicking the arrow next to the date field. A calendar is opened where you can select the desired beginning or ending date.

18) Transaction time: you can set a condition on the date and time of the transaction. You can change the beginning or ending date for the condition by clicking the arrow next to the date field. A calendar is opened where you can select the desired beginning or ending date.

19) Type: the value of the field 'Type' of a transaction so that the report will be generated only for transactions of that type.

20) User group(s): the beginning characters of the value of the field 'User group' of a user group so that the report will be generated only for user groups beginning with those characters.

21) Workstation: the value of the field 'Workstation' of a workstation so that the report will be generated only for that workstation.

Report group	Report name	Description	Possible conditions
Card holders	Card holders per cost centre	List of card holders per cost centre	None
Card holders	Card holders per group	List of card holders per user group	None
Cards	Balance reconstruction	Balance reconstruction	Card nr, collection period
Cards	Balance reconstruction_old	Balance reconstruction from old transactions	Card nr, collection period
Cards	Balance summary (group total balance)	The total balance on all cards per user group	None
Cards	Cards	Cards (card number, card balance and card status) per user group and per cost centre	Card status
Groups	Rights and tokens per user group	Token numbers and rights connected to them per user group and per cost centre	None
Groups	User groups and Cost centres	Combinations of user groups and cost centres	None
Products	Rights and product groups	Product groups per right	None
Products	Rights for terminals	List per right of terminals where the right can be used	None
Products	Products	Products (product name and price) per product group.	Product group
System	Admin log	Administrators' actions in chronological order	Administrator, time period
System	Administrator groups	Administrator groups and their level of authorisation	None
System	Administrators	List of administrators	None
System	Card history	History of special actions effected per card (such as personalised or hotlisted)	Card nr, Administrator, time period
System	Collector errors	List of collector errors	Time period
System	Collector log	List of collector's actions	Time period
System	Empty report	Almost empty report template as starting point for creating new report templates	None

Report group	Report name	Description	Possible conditions
System	Status	Lists how many cards, card holders, user groups, administrators, terminals, transactions, data collections and workstations there are in the database	None
Terminals	Terminal configuration	The configuration per terminal.	Serial number
Terminals	Terminal groups	A list of the terminal groups	None
Terminals	Terminals	Terminals (serial number, terminal name, location, connection type, last config, last data collection) per terminal group	Connection(s)
Transactions	Card errors	Card errors per terminal	None
Transactions	Total transactions per terminal	Total number of transactions and corresponding amount for a specific terminal	Serial number, collection period
Transactions	Transactions	Transactions in chronological order	Collection period, Serial number, card nr, transaction status
Transactions	Transactions per product	Transactions per product in chronological order	Collection period, product(s)
Transactions	Transactions per terminal,card_old	Transactions per terminal and per card, from old transactions table	Collection period, Serial number, card nr, transaction status
Turnover	Data collections – chronological	Data from Magnabox counters in chronological order	Serial number, collection period, collection type
Turnover	Turnovers -extended	Terminal data with extended information	Serial number, collection period, collection type
Turnover	Data collections – FacilityPro card		
	Data collections – payment terminals	Collections in chronological order per payment terminal	Serial number, collection period, collection type
Turnover	Turnovers per terminal		
Turnover	Reload terminals	Collections of reload terminals with reloaded amounts	Serial number, collection period, collection type
Turnover	Reload terminals – cards	Collections of reload terminals with extended info about Card dispensing	Serial number, collection period, collection type
Turnover	Reload terminals – cashboxes	Collections of reload terminals with extended info about Cash reload	Serial number, collection period
	Reload terminals – extended		
Turnover	Reload terminals – hoppers	Collections of reload terminals with extended info about the hoppers	Serial number, collection period, collection type
	Collections -tills		

Report group	Report name	Description	Possible conditions
	Budget usage per cost centre, terminal		
	Budget usage per group, cost centre		
Turnover	Budget usage	The total discount per right and per user group	Right ID, collection period
Turnover	Budget usage per cost centre	The total discount per cost centre per terminal	Serial number, collection period
Turnover	Budget usage per group	The total discount per user group	Serial number, collection period
Turnover	Budget usage per group,token	The total discount per user group and per token	User group(s), collection period
Turnover	Budget usage per terminal	The total discount per terminal per user group	Serial number, collection period
Turnover	Sales per product	Total sales per product per product group	Product group ID, collection period
Turnover	Sales per service slot	Total sales per service slot per terminal	Collection period, serial number
Turnover	Sales per terminal – discounts	Total sales and discounts per terminal	Terminal group, collection period
Turnover	Sales per terminal – totals	Total sales per terminal	Terminal group, collection period
Turnover	Sales per terminal,product group	Total sales per product group per terminal	Product group ID, collection period

Table 7-1 Overview of the standard report templates that are supplied with FacilityPro Manager

7.4 The tab 'Reporting options'

On the tab 'Reporting options' of the reports data screen (Figure 7-2) you can view and edit a number of fields.

These fields are listed below and if there is a default value it is given between brackets. You need only edit these fields if you want to use values other than the default values.

1) Separator: (Tab) the character that will be used as separator when reports are archived (saved) to .csv format.
2) Reports folder: (archive) the folder where report files are saved. The path name of the folder in which the FacilityPro executable file has been stored (default: C:\Program Files\Magna Carta\FacilityPro Manager\bin) will be added in front of the value of this field.
3) Reporting start date: if a date is given here all reports will be generated on the data from this date onwards by default, unless other dates are specified on the tab 'Data selection'.
4) Start of the week: (Monday) the day of the week used to determine which period is required when reports are generated using the data selection radio button 'This week' or 'Last week'.
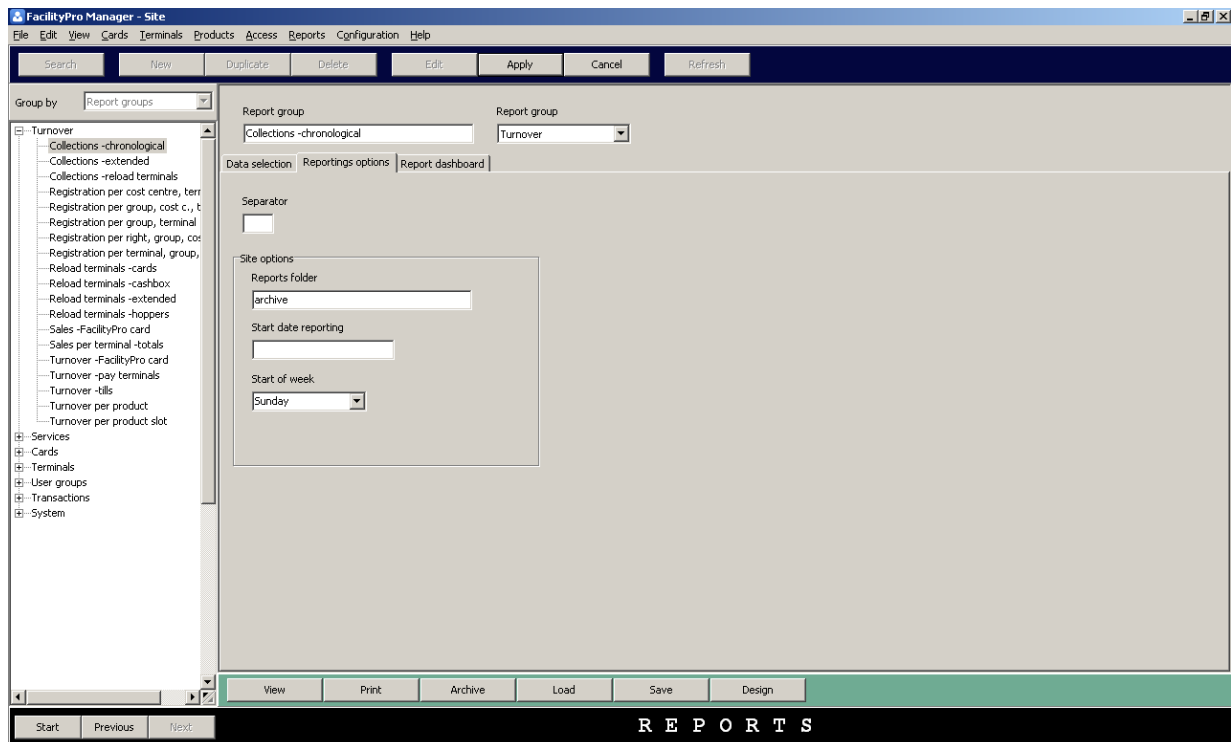
Figure 7-2 The tab 'Reporting options' of the reports data screen

7.5 The tab 'Report dashboard'

The tab 'Report dashboard' is where the report dashboard is designed. The report dashboard can only be accessed by clicking the 'Reports' button from the opening screen (Figure 2-2). If the authorisation level for 'Report dashboard' for the administration group of the current administrator has the value 'Visible' (§8.3.1), pressing the 'reports' button from the opening screen will open the report dashboard. From the report dashboard, a limited number of reports with predefined data selection criteria can be viewed and/or printed. After working with the report dashboard, the administrator can only log out of FacilityPro Manager. An example of a report dashboard can be seen in Figure 7-3.

FacilityPro Manager has a large number of standard reports and a large number of selection criteria that can be defined for each report before it is generated. By defining a few reports (maximum 10) that are of interest for your site management and predefining the selection criteria that these reports should be generated with, one can greatly simplify report generation. The tab 'Report dashboard' allows the site manager to define which reports should be on the report dashboard. Any administrators belonging to user groups for which the authorisation level for 'Report dashboard' has the value 'Edit' or higher (§8.3.1) can edit the reports shown on the report dashboard. If the value is 'Edit/add/delete' the administrator can also add reports to the dashboard or delete reports from the dashboard.
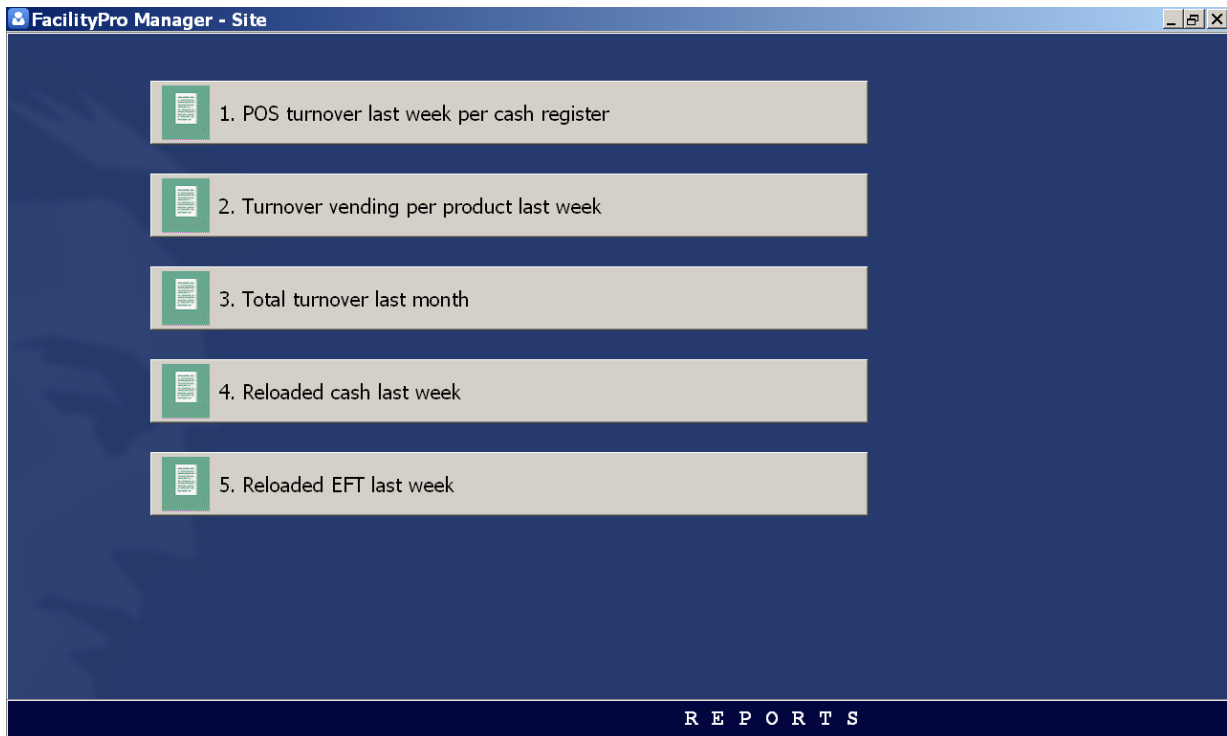
Figure 7-3 The report dashboard

To create an administrator group which allows the administrators only to generate reports through the report dashboard, one need only create a new administrator group and assign only the report dashboard authorisation level 'Visible' (§8.3.1). All other authorisation levels will be 'Invisible' and administrators in this group will see only the 'Reports' button on the opening screen and will see the report dashboard when they press this button.

How to add a report to the report dashboard:

1. Choose menu **Reports**.
2. Choose **Reports**.
3. Click the tab 'Report dashboard'. On the tab 'Report dashboard' (Figure 7-4) you can see which reports are already on the report dashboard in the field 'Dashboard reports'.
4. Click Edit.
5. Click New (under the field 'Dashboard-reports'). An empty slot will appear in the field 'Dashboard reports'.
6. Enter the name you want the report to have on the dashboard in the field 'Dashboard name'.
7. Change the value of the field 'Position' if you do not want this report to be added as the last report on the dashboard.
8. Click the arrow next to the field 'Report name' and select the report you want to add to the dashboard.
9. In the section 'Selection', enter data in one or more fields if you want to enter conditions, through which you define which part of the data from the database is to be used for the report.
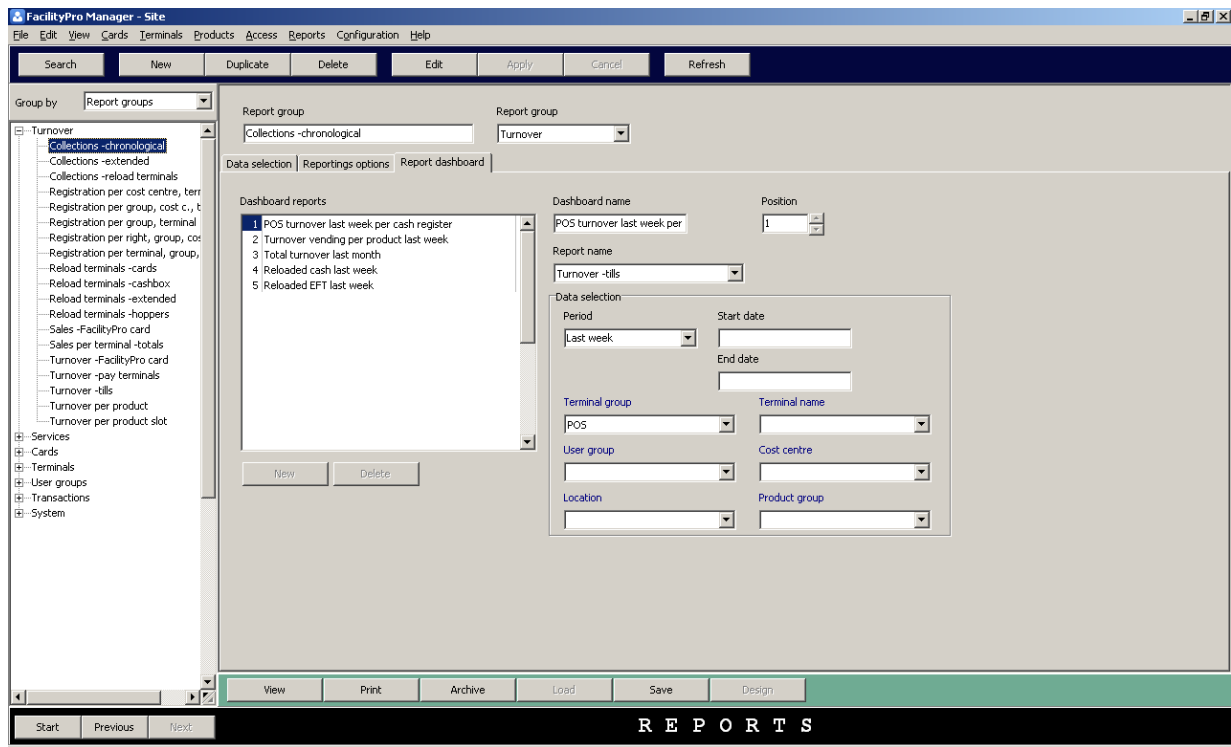
Figure 7-4 The tab 'Report dashboard' of the reports data screen

10. Click Apply.
11. Click OK. The report has been added to the report dashboard.

How to delete a report from the report dashboard:

1. Choose menu **Reports**.
2. Choose **Reports**.
3. Click the tab 'Report dashboard'. On the tab 'Report dashboard' (Figure 7-4) you can see which reports are on the report dashboard in the field 'Dashboard reports'.
4. In the field 'Dashboard reports', select the report you want to delete.
5. Click Edit.
6. Click Delete (under the field 'Dashboard-reports').
7. Click Apply.
8. Click OK. The report has been deleted from the report dashboard.

How to edit a report from the report dashboard:

1. Choose menu **Reports**.
2. Choose **Reports**.
3. Click the tab 'Report dashboard'. On the tab 'Report dashboard' (Figure 7-4) you can see which reports are on the report dashboard in the field 'Dashboard reports'.
4. In the field 'Dashboard reports', select the report you want to edit.
5. Click Edit.
6. Edit one or several of the fields to the right of the field 'Dashboard reports'.
7. Click Apply.
8. Click OK.

8 Configuration

The main menu 'Configuration' of FacilityPro Manager has menu options which open the data screens representing the six tables in the database that make up the configuration of the site: site options, administrators, administrator groups, workstations, timetables and frame types.

8.1 Site options

The database of FacilityPro Manager contains a site options table that is different from most tables in the database because it contains only one record, which contains certain general data of the site, such as the name of the site and the currency used at the site. From the site options data screen you will not be able to use the function buttons New, Duplicate or Delete. When FacilityPro Manager is installed, the default name of the site is 'Site' and some of the fields have default values, whereas others need to be entered.

On the site options data screen, the record list contains only one record, representing the site where FacilityPro Manager is being used to manage an electronic transaction system. From this screen you can view, and edit the site record.

After installing FacilityPro Manager and possibly connecting a PC card reader, entering the basic site data into the site record will be one of the first things to be done to make the system ready for use (§8.1.1). Also, if a PC card reader has been connected to one of the workstations, the action button Read Cardkeys file on the tab 'Settings' of the site options data screen will have to be activated before FacilityPro Manager will be able to read and write cards with this PC card reader.

The tabs of the site options data screen
The site options data screen has the tabs: 'Settings', 'Date/currency notation', 'System currency', 'Security', 'Other' and 'Terminal configuration'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of the site record can be viewed or edited.
Above the tabs, at the top of the data entry area of the site options data screen is one field: 'Site name'. This field is therefore visible whichever is the active tab.
The tab 'Settings' contains the basic data of the site, and is discussed in §8.1.1.
The tab 'Date/currency notation' is discussed in §8.1.2.1.
The tab 'System currency' is discussed in §8.1.2.2.
The tab 'Security' is discussed in §8.1.2.3.
The tab 'Other' is discussed in §8.1.2.4.
The tab 'Terminal configuration' is discussed in §8.1.2.5.

8.1.1 Entering the basic data of the site

The fields of the data entry area of the site options data screen (when the tab 'Settings' is active, Figure 8-1) are listed and explained below. The fields marked * must be assigned a value:

1) Site name[*]: the name of the site, default 'Site'

2) Site code[*]: a numeric code belonging to the site. This number can be chosen freely but should not be equal to site codes on other sites for obvious security reasons. Site codes are assigned to sites by Magna Carta or your local FacilityPro supplier. The site code will be written onto each individual card of the site and the PC card readers and terminals of FacilityPro Manager can only read cards of which the site code is equal to the site code defined in this field of the site record. The only case in which you will leave this field empty is if the site is MiniTix-only (i.e. only MiniTix payment keys will be accepted) or Chipknip-only (i.e. only open e-purse cards will be accepted).

3) Number of tokens[*]: the number of tokens that must be written on the card (this number must be greater than zero, and equal or smaller to the number of tokens that can physically be stored on the cards). Each token can represent a right. The greater the number, the more flexible the site. For each user group - cost centre combination, this many tokens will be created in the tokens table in the database. How many tokens can be saved on a card depends on the type of card used, and will be indicated by the manufacturer of the card. The default value for 'Number of tokens' is 6. This is the number of tokens we advise using on Mifare cards, the cards mostly used with FacilityPro Manager at present.

4) Service card number: the service card is a card used by the administrator to service the terminals. For example: Reload terminals can only be emptied using the service card. This field contains the card number of the service card.

5) Open E-purse folder: if Chipknip cards are accepted on site, this field must contain the folder where the Chipknip collections are stored before being sent to Equens for processing, unless the folder is determined in the field 'Open E-purse folder' on the tab 'Settings' of a workstation (§8.4.1.1).

6) Terminal data folder: This field will be filled in if you want to determine a fixed folder where the configuration and terminal data files are saved for terminals that are polled with a handheld or USB stick. For handhelds, this field will normally stay empty and FacilityPro manager will determine the folder where the configuration and terminal data files are saved for terminals that are polled with a handheld automatically, on the basis of which handheld is being used and the Windows login. This allows for several administrators and handhelds to be used for manual polling. For USB sticks, the path (drive letter) Windows assigns to access the USB stick must be entered.

7) PIN journal folder:

8) Server: the name of the SQL server on which the database is stored and managed. This is a read-only field.

9) Database: the name of the database. This is a read-only field.

10) User: if an SQL Server database login is in use, this user name is shown.

11) Hotlist date: the date the hotlist was last changed (this is a read-only field).

12) Hotlist length: (1000) the maximum number of cards on the hotlist that the terminals can store. This is a read-only field. For terminals with older firmware than version 3.16 the maximum hotlist length is 300.

13) Card update (PIM): this field can be checked if the PIM module of FacilityPro Manager has been purchased. It must be checked for the tab 'Card update' of the cards data screen and the tab 'Servers' of the workstations data screen to be active and therefore PIM functionality to be available. PIM stands for Post Issuance Managements of cards.

It requires the PIM server to be installed and activated in the same directory as where FacilityPro was installed, default: C:\Program Files\Magna Carta\FacilityPro Manager\bin. It also requires that the IP address of the PIM server is entered as the value of the parameter 'Server_IP' of the machine types of all the terminals on the site where one wants PIM to be implemented. Lastly, the authorisation levels for 'Card.card update (PIM)' and at least one of the functions 'Card.new balance', 'Card.change token values', 'Card.new tokens' and 'Card.hotlist' should have the value 'Available' (§8.3.1).

Some of the fields listed above will have to be filled in before you can start using FacilityPro Manager to manage the site. Some of the field on the tab 'Security' must also be filled in.

The tab 'Settings' also has three action buttons which are described in §8.1.1.1, §8.1.1.2 and §8.1.1.3.

How to enter the data of the 'Settings' tab of the site record:

1. Choose menu **Configuration**.
2. Choose **Site options**. You will see the site options data screen (Figure 8-1). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings'.)
3. Click Edit.
4. Edit the fields 'Site name', 'Site code', 'Number of tokens' and any other fields of the data entry area that you wish to fill in or change (§2.1.2.4).
5. Edit the fields of the tab 'Security' (§8.1.2.3).
6. Click Apply.
7. Click OK. The edited site record will be saved.
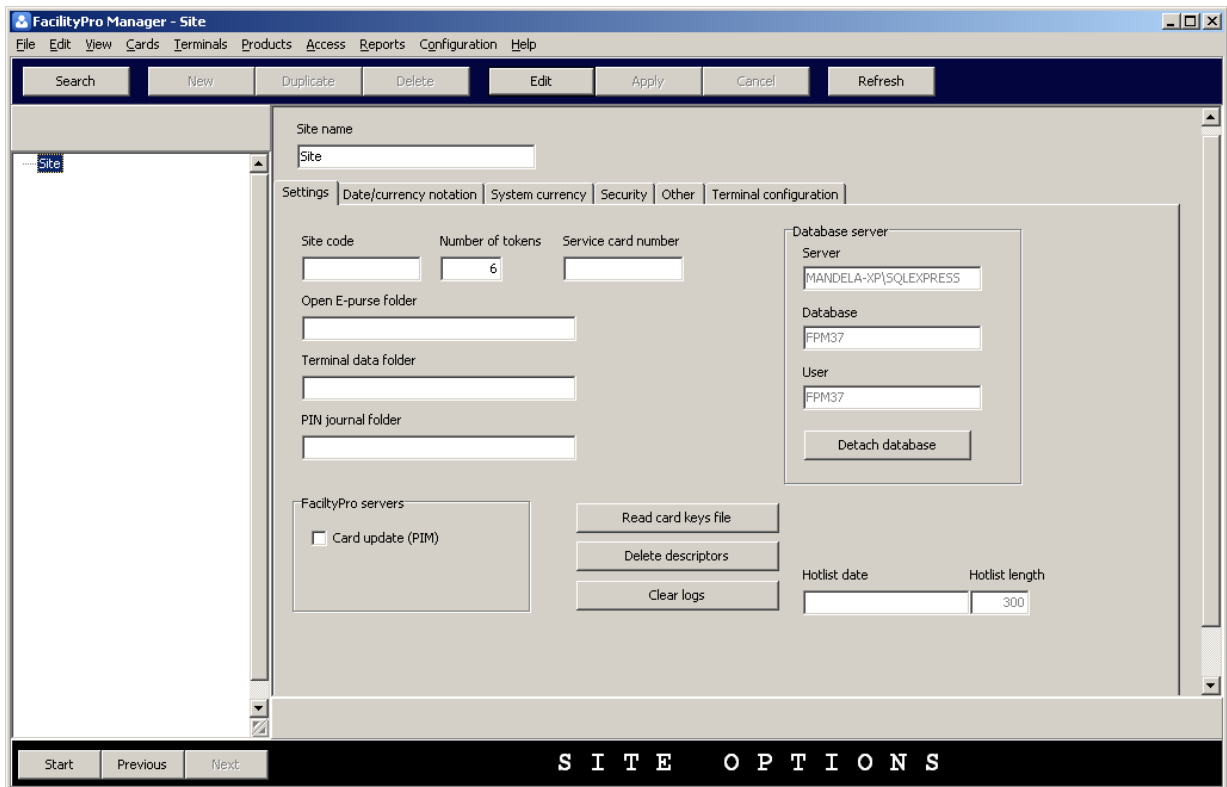
Figure 8-1 The tab 'Settings' of the site options data screen

8.1.1.1 The action button Detach database

The action button Detach database clears the settings in the Windows registry which point to the FacilityPro Manager database. When you use this action button and then close down the program, FacilityPro Manager will start up the next time not knowing which database to use and ask that you define the database to use showing the screen as in Figure 8-2.
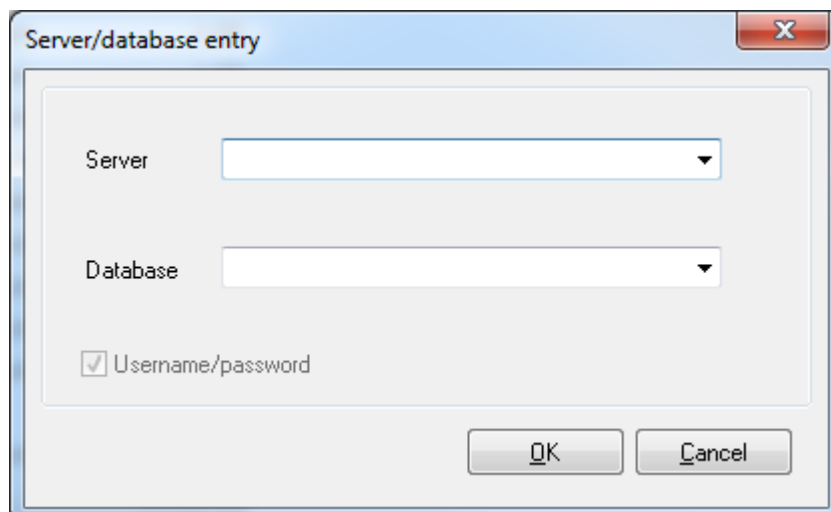
Figure 8-2

8.1.1.2 The action button Read Cardkeys file

The action button Read Cardkeys file reads the file Cardkeys.ini into the database.
When cards are written with the action button Write (§3.1.3.4), the PC card reader first checks whether the card has already been initialised. If this is not the case, the card is first initialised and then personalised (data from the database is written to the card). The file Cardkeys.ini provides FacilityPro Manager with the keys it needs to be able to initialise, read or write cards with a PC card reader.
You only need to use the action button Read Cardkeys file once (on any workstation) to enable all workstations to which a PC card reader is connected to read and write cards. We recommend that you use the action button Read Cardkeys file once, after you have installed the PC card reader(s) to the workstation(s) (see FacilityPro Manager Installation Manual), and entered the data for these PC card reader(s) in the workstation table (§8.4.1.3). After this, you will only need to use the action button if there is a change in the file Cardkeys.ini.
The file Cardkeys.ini is provided by your dealer. When you use the action button Read Cardkeys file you will have to specify where that file is located.

8.1.1.3 The action button Delete descriptors

Sometimes updated terminal software is installed on one or more of the terminals on the site, which means the descriptor will have changed. If the value of the descriptor version remains the same on those terminals, but the descriptor itself has changed, the descriptor table in the database will no longer be correct. This table tells FacilityPro Manager the descriptor (the format of the data in the terminals) for each descriptor version. The action button Delete descriptors deletes all the records in the descriptor table that correspond to one or more specific values of the descriptor version.
When FacilityPro Manager next makes a connection with a terminal that has a descriptor version for which the files in the descriptor table were deleted, the updated data will be read into the descriptor table automatically.
FacilityPro Manager must know the correct descriptor version for each terminal, and the corresponding descriptor, in order to communicate correctly with the terminals.

How to use the action button Delete descriptors:

1. Choose menu **Configuration**.
2. Choose **Site options**. You will see the site options data screen (Figure 8-1). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings').
3. Click Delete descriptors. You will see a dialog screen (Figure 8-3).
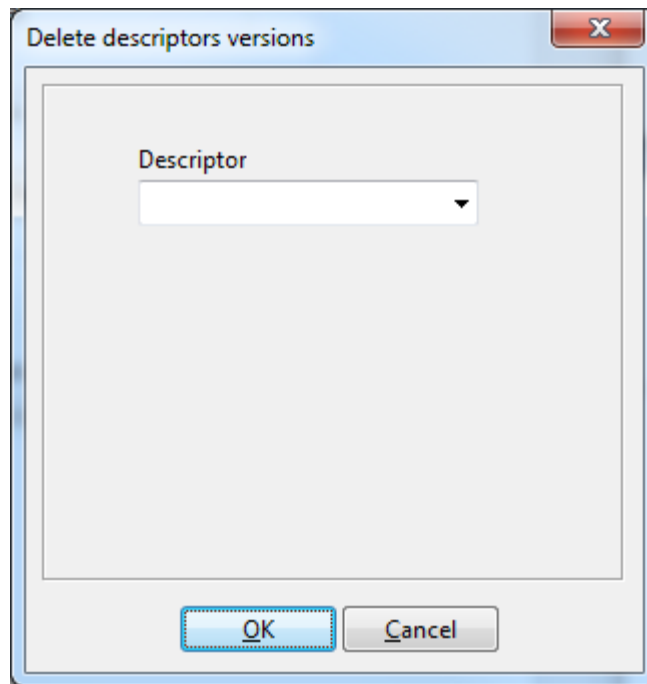
Figure 8-3 The dialog screen of the action button Delete descriptors

4. Type the descriptor version for which new terminal software has been installed in the terminals (e.g. **'desv0003'**). You can also type only the starting characters of the descriptor versions, and thereby execute the action Delete descriptors for several descriptor versions at the same time (e.g. typing **'desv001'** will effect descriptor versions desv0010 through desv0019). All records in the descriptor table corresponding to the descriptor versions you specify here will be deleted. For each of these descriptor versions, records containing the correct descriptor data will be added to the descriptor table the next time FacilityPro Manager establishes a connection with a terminal with that descriptor value.

5. Click OK. You will see the message 'Delete all descriptors [specified value]* so new ones will be read?'.

6. Click OK. The action is completed.

8.1.1.4 The action button Clear logs

FacilityPro Manager keeps a number of logs:

1) The collector log (§8.4.1.2.3) shows all activities of the collector
2) The user log or admin log shows when the programme has been started or closed down and which administrators have logged in or out
3) The server log (ALS/PIM) shows all activities of the PIM and ALS servers (§8.4.1.4)
4) The transaction log is a log of all transactions effected either at a terminal or with FacilityPro Manager (e.g. writing a card, changing the balance of a card using card service etc.)

In order to keep the size of the database manageable, old records that are no longer of interest can be deleted using the action button Clear logs. You can specify which table you want to clear and the date up to which you want to delete records.

How to clear (a part of) a log table:

1. Choose menu **Configuration**.
2. Choose **Site options**. You will see the site options data screen (Figure 8-1). (The tab 'Settings' will normally be active by default, if another tab is active, click the tab 'Settings').
3. Click Clear logs. You will see a dialog screen (Figure 8-4).
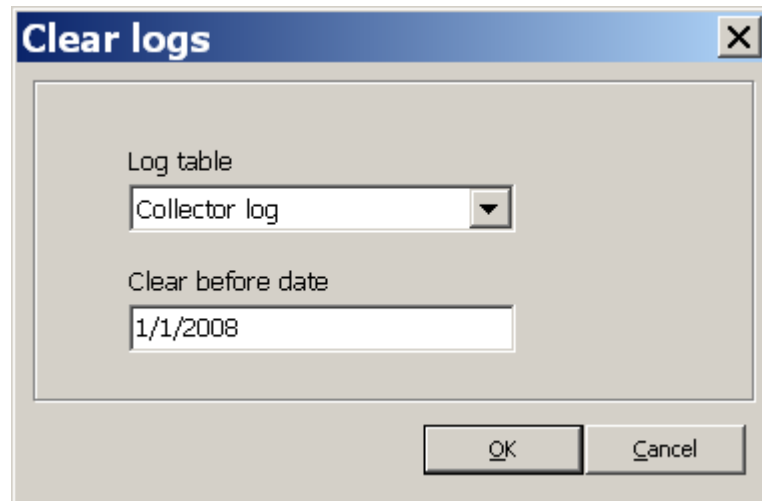
Figure 8-4 The Clear logs screen

4. If the log table you want to clear is not the collector log, click on the drop-down arrow and select the desired log table.
5. Enter a date. The log will be cleared up to this date. Entries with this date will not be erased.
6. Click OK. You will see a message as in Figure 8-5.
7. Click OK. (Click Cancel to abort the action.) You will see the message 'Done'.
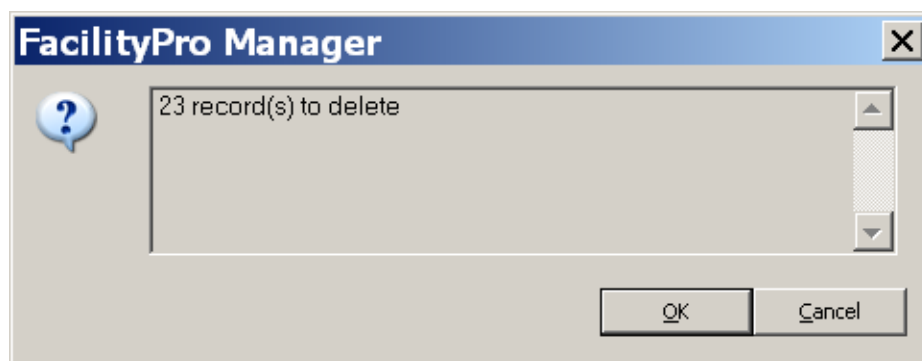
Figure 8-5 Records to delete

8.1.2 The tabs of the site options data screen

Apart from the tab 'Settings' of the site options data screen, there are four other tabs, the use of which is described in the following paragraphs.

8.1.2.1   The tab 'Date/currency notation'

On the tab 'Date/currency notation' of the site options data screen (Figure 8-6) you can view and edit a number of fields of the site record.

Figure 8-6 The tab 'Date/currency notation' of the site options data screen

These fields are listed below and the default value for each field is given between brackets. You need only edit these fields if you want to use values other than the default values.

1) Decimal separator (,)
2) Thousand separator (.)
3) Date separator (-)
4) Short date format (dd-MM-yy)
5) Decimals in currency (2)

8.1.2.2   The tab 'System currency'

On the tab 'System currency' of the site options data screen (Figure 8-7) you can view and edit a number of fields of the site record.
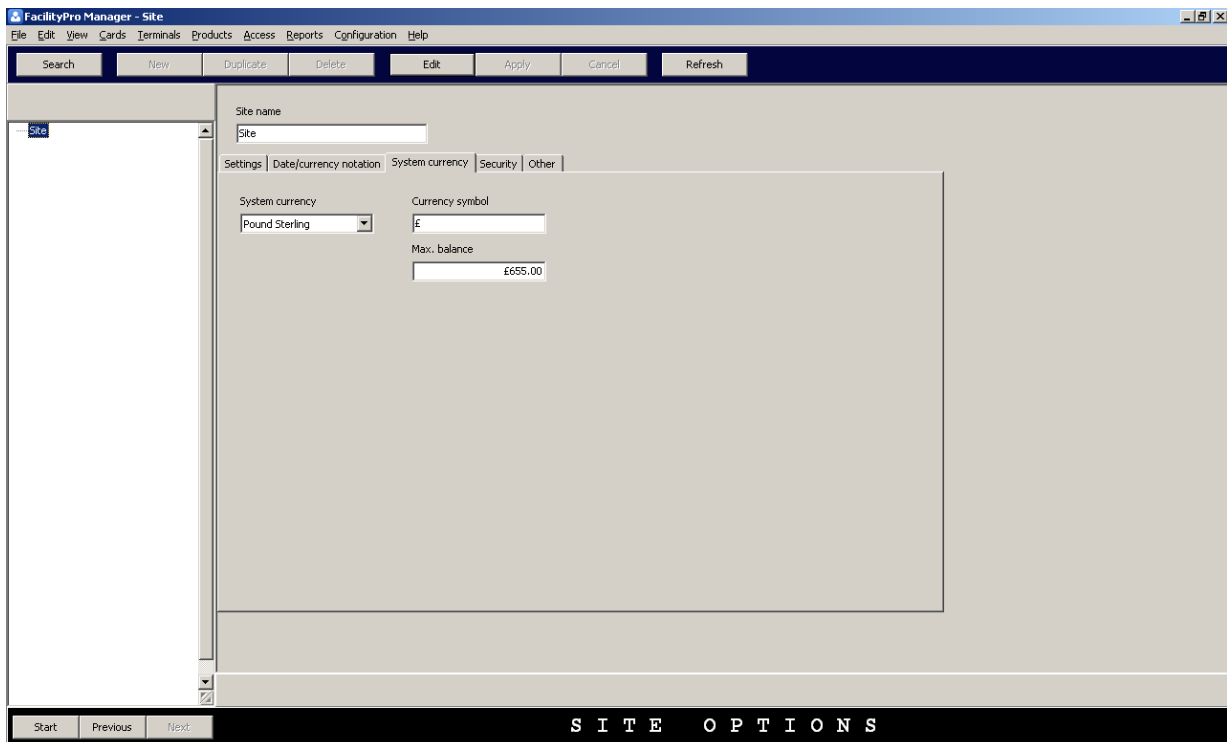
Figure 8-7 The tab 'System currency' of the site options data screen

These fields are listed below and if there is a default value it is given between brackets. You need only edit these fields if you want to use values other than the default values.

1) System currency (Euro).
2) Currency symbol (€)
3) Max. balance: (€655) the maximum balance that you want to allow on a card.

There are also some fields which will normally be invisible. They are only visible when a site is in a transition period, converting from one currency to another (e.g. £ -> €). To make them visible the line 'Advancedsettings=1' must be added to the paypro.ini file (found in the directory where FacilityPro was installed, default: C:\Program Files\Magna Carta\FacilityPro Manager\bin). These are the fields:

4) Former currency: when the system currency is changed to Euro, and there are still cards in use with the former currency, the system must go through a currency transition. The field 'System currency' must be set to Euro, the field 'Former currency' must be filled in, and the date on which the Euro must be enabled must be entered in the field 'E-day'.
5) E-day: the date that Euro conversion will take place. If a date is entered here, from this date the terminals will use the Euro as the system currency and card holders will see their card balance and the prices of products in Euros.
6) Euro conversion: the value of 1 Euro in the system currency.

8.1.2.3 The tab 'Security'

On the tab 'Security' of the site options data screen (Figure 8-8) you can view and edit a number of fields of the site record. The fields marked [*] must be assigned a value.

Figure 8-8 The tab 'Security' of the site options data screen

1) Keyversion1[*]: a number. Default value is 1. Together, the fields 'Keyversion1', 'Paymentmasterkey1' and 'Servicemasterkey1' form the first key set (key set 1). A key set is a combination of three different fields to ensure maximum security of the data on the cards. A key set is written onto each individual card. FacilityPro Manager can handle three different key sets. The terminals and PC card readers of FacilityPro Manager will only accept cards with one of these three key sets. When data is written to a card, FacilityPro Manager will always use the key set with the highest existing keyversion, which should be the newest key set (key set 3 if it has a value, otherwise key set 2 if it has a value, otherwise key set 1. To assure that key set 3 is indeed the newest key set, the key sets must be moved up manually by the administrator when a new key set is introduced: the old key set 1 will be deleted and is replaced by the old key set 2, the old key set 2 is replaced by the old key set 3 and the old key set 3 is replaced by the new key set. The only case in which you will leave this field empty is MiniTix-only (i.e. only MiniTix payment keys will be accepted) or if the site is Chipknip-only (i.e. only open e-purse cards will be accepted).
2) Paymentmasterkey1[*]: a hexadecimal number of 16 digits. For more information see Keyversion1.
3) Servicemasterkey1[*]: a hexadecimal number of 16 digits. For more information see Keyversion1.
4) Keyversion2: Together, the fields 'Keyversion2', 'Paymentmasterkey2' and 'Servicemasterkey2' form the second key set (key set 2). For more information see Keyversion1.

5) Paymentmasterkey2: For more information see Keyversion2 and Paymentmasterkey1.
6) Servicemasterkey2: For more information see Keyversion2 and Servicemasterkey1.
7) Keyversion3: Together, the fields 'Keyversion3', 'Paymentmasterkey3' and 'Servicemasterkey3' form the third and current key set (key set 3). For more information see Keyversion1.
8) Paymentmasterkey3: For more information see Keyversion3 and Paymentmasterkey1.
9) Servicemasterkey3: For more information see Keyversion3 and Servicemasterkey1.

8.1.2.4   The tab 'Other'

On the tab 'Other' of the site options data screen (Figure 8-9) you can view and edit a number of fields of the site record.

Figure 8-9 The tab 'Other' of the site options data screen

These fields are listed below and if there is a default value it is given between brackets. You need only edit these fields if you want to use values other than the default values.

1) Contact name: name of the contact person for this site.
2) Address: address of the contact person for this site.
3) Phone: phone number of the contact person for this site.

8.1.2.5   The tab 'Terminal configuration'

On the tab 'Terminal configuration' of the site options data screen (Figure 8-10) you can view and edit a number of fields of the site record. These fields are listed below and and if there is a default value it is given between brackets
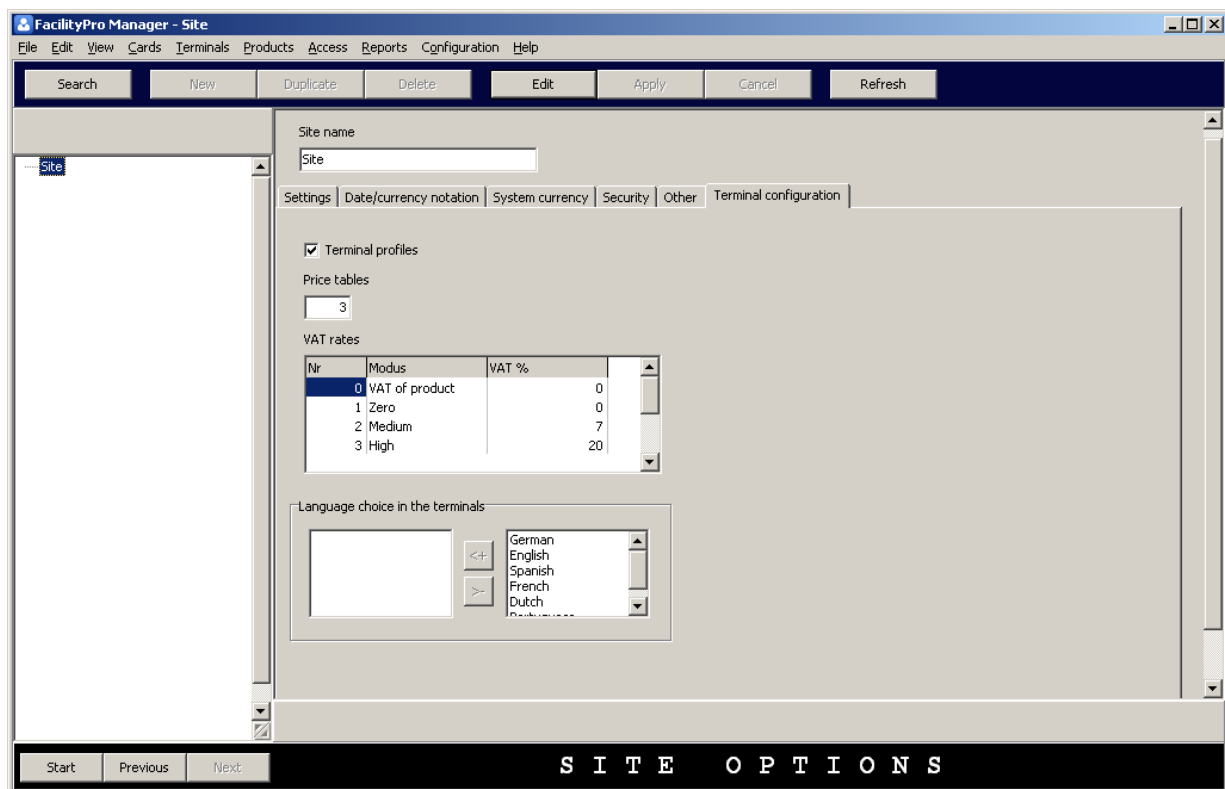
Figure 8-10 The tab 'Terminal configuration' of the site options data screen

1) Terminal profiles (unchecked): if this field is checked, terminal profiles will be used and there will be an extra menu option 'Terminal profiles' in the main menu 'Products'. On the tab 'Products' of the terminal data screen you will define which terminal profile the terminal should have in stead of which products are on sale at that terminal. In a terminal profile you define which products are available at which price and, if applicable, which VAT level user groups have for these products. When you have multiple terminals with the same products, this saves time, as you only have to define which products are available once, and when the available products change you only need to edit the terminal profile, rather than the tab 'Products' for each terminal.

2) Number of extra prices (0): This field can have a maximum value of 4. If the value of this field is greater than 0 products can be sold at different prices. A product will be sold for a different price than the standard price if the user group the card holder belongs to has been assigned a right of type 'Price group' (§5.4.1.5). In order to use extra prices you must therefore create price group rights.

3) VAT rates (0, 7 and 20%): This field allows you to define three VAT rates, which are referred to as 'Zero', 'Medium' and 'High'. When defining a VAT rate for products or product groups, one of the three values defined here can be chosen from a drop-down list. The percentage for VAT rate 'Zero' will usually but not necessarily be 0. If terminal profiles are used on your site (the field 'Terminal profiles' should be checked), it is possible to assign these VAT rates to user groups in terminal profiles, so that the VAT due for sales can differ per user group. Reports can be generated which show how much VAT is due for sales effected.

4) Language choice in the terminals: This field contains a list (visible in the left column) of which languages will be used in the terminals. If this list is not empty, the messages

shown on the displays of the terminals will be shown in the language shown in the first position by default. The card holder can toggle between the selected languages (in the order seen in this list) using the language button on the card reader at the terminals. If a terminal has a descriptor version lower than desv0011 (this can be checked in field 'Descriptor version' on the 'Settings' tab of the terminals data screen) the terminal will not be able to toggle languages and will not be affected by the languages selected in this list. Languages can be removed from and added to the list using the `>-` and `<+` buttons. If no languages are selected here the terminal will use the language determined in the terminal at delivery as the first language (presumably the language of your site) and all other available languages for toggling, starting with the language following the default language, in this order: Dutch – English – German – French - Portuguese. Defining only one or two languages in this list will make the omitted languages unavailable on the terminals, which could be desirable on your site.

8.2 Administrators

We call the people who work with FacilityPro Manager the administrators. Sometimes there might be more than one administrator and each will be supposed to perform different tasks with FacilityPro Manager. It is important to keep in mind that FacilityPro Manager can be used to manipulate data such as the prices of products and the balance on cards. Such power must only be given to those people who can be entrusted with it and will not misuse it. FacilityPro Manager therefore offers the possibility to assign varying authorisation levels to different administrators by dividing them into administrator groups (§8.3).
On the administrators data screen, the record list is a list of all the administrators. From this screen you can view, create, edit, and delete administrators.

8.2.1 Creating an administrator in the database

The data entry area of the administrators data screen shows fields with the name, password and administrator group of the selected administrator. To create an administrator, you will have to fill in all of these fields.

How to create an administrator:

Note: To create an administrator, the administrator group the administrator belongs to must exist in the database.

1. Choose menu **Configuration**.
2. Choose **Administrators**. You will see the administrators data screen (Figure 8-11).
3. Click New.
4. Edit the fields 'Administrator', 'Password' and 'Administrator group'.
5. Click OK. The new administrator will be saved. The record list will include the name of this new administrator.
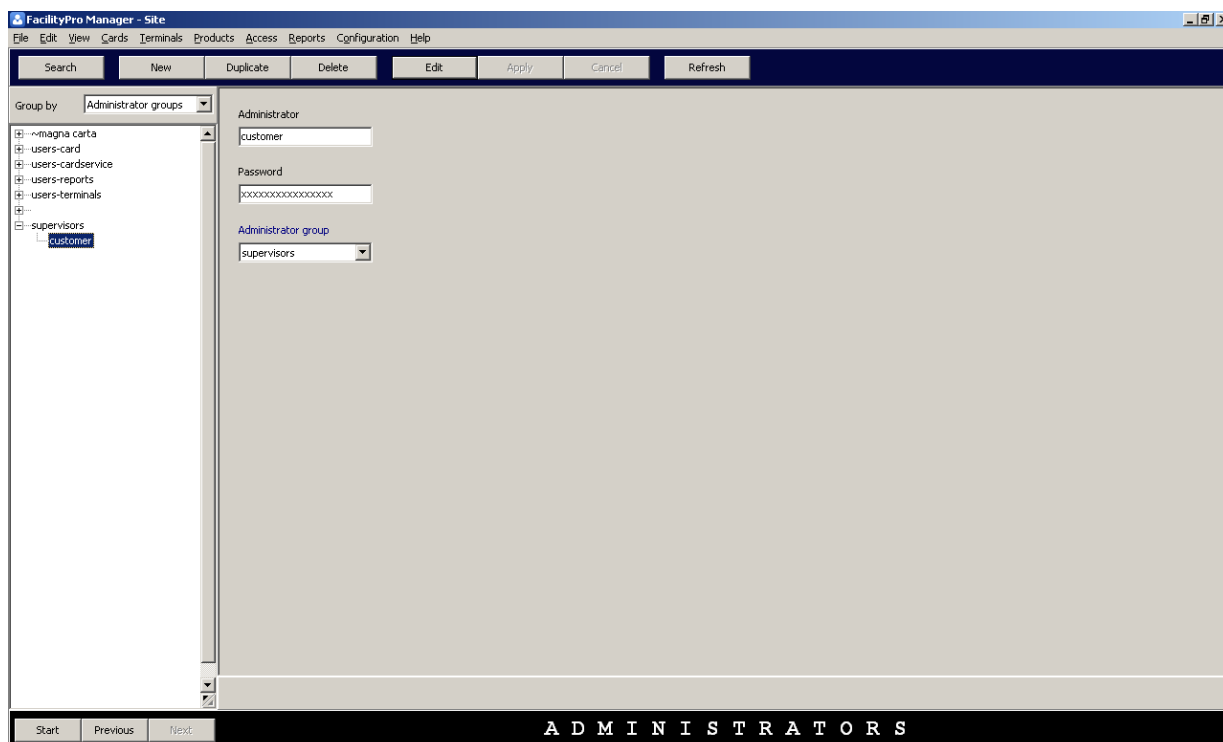
Figure 8-11 The administrators data screen

8.3 Administrator groups

An administrator group is a group of administrators that have the same level of authorisation to perform tasks with FacilityPro Manager. When you define a new administrator group, you have to specify for each of the 20 data screens, which actions the administrators of that group may perform with the data on that screen. You must also specify the authorisation level for use of the card service screen, the report dashboard, the menu options 'Import' and 'Export' of the menu 'File' and for control of the collector(s). For each of the above, there are five authorisation levels:

1) 'Invisible': the administrator cannot open the data screen or the card service screen (the menu option is invisible) / cannot open or edit the report dashboard / cannot see the menu options 'Import' and 'Export' / cannot see the tab 'Collector' of the workstations data screen

2) 'Visible': the administrator can only view the data on the data screens / can open the card service screen / will open the report dashboard whenever the button 'Reports' is used on the opening screen / cannot edit the report dashboard / can see and use the menu options 'Import' and 'Export' / can see the tab 'Collector' on the workstations data screen and use the action button Log

3) 'Edit': the administrator can view and edit the data on the data screens (and use the action button Terminal data… on the tab 'Collector' of the workstations data screen)/ can open the card service screen / cannot open the report dashboard / can edit the reports on the dashboard / can see and use the menu options 'Import' and 'Export' /

can see the tab 'Collector' on the workstations data screen and use the action buttons Start, Stop and Log

4) 'Edit/Add': the administrator can view, edit and add data, but not delete data (and can use the action button Terminal data … on the tab 'Collector' of the workstations data screen)/ can open the card service screen / cannot open the report dashboard, but can edit and add reports on the dashboard / can see and use the menu options 'Import' and 'Export' / can see the tab 'Collector' on the workstations data screen and use the action buttons Start, Stop and Log

5) 'Edit/Add/Delete': the administrator can view, edit, add and delete data (and use the action button Terminal data … on the tab 'Collector' of the workstations data screen)/ can open the card service screen / cannot open the report dashboard, but can edit, add and delete reports on the dashboard / can see and use the menu options 'Import' and 'Export' / can see the tab 'Collector' on the workstations data screen and use the action buttons Start, Stop and Log

For a number of action buttons on the cards data screen and the card service screen, for the activities of increasing and decreasing the balance on a card from the card service screen, for the tab 'Tokens' on the card service screen and for the menu options 'Run database script' and 'Database upgrade' of the menu 'File', you also specifically assign one of three authorisation levels:

1) 'Invisible': the action button/tab/field(s) will not be visible on screen
2) 'Visible': the action button/tab/field(s) will be visible on screen but the administrator cannot use it/them
3) 'Available': the administrator can use the action button/tab/field(s)

Normally, only one person, the system administrator, is allowed to define new administrators and new administrator groups. Maybe another administrator will be responsible only for making reports about the use of the system and will therefore only be authorised to work with the reports data screen.

When a new administrator group is created, the default value for all authorisation levels is 'Invisible'.

The authorisation level has the following effect on the function and action buttons of the data screens:

'Edit/Add/Delete'
All function and action buttons can be used.

'Edit/Add'
All function and action buttons can be used, except the function button Delete.

'Edit'
The function buttons Delete, New and Duplicate are not available. The following action buttons also become unavailable:

Data screen	On tab	Action buttons
Cards		New, Delete, Select
		(on card holders data screen)
Machine types		Add parameter
User groups	Rights	Tokens

'Visible'

All of the function buttons and action buttons that are unavailable for the authorisation level 'Edit' are also unavailable for the authorisation level 'Visible'. The function button Edit is also unavailable. The following action buttons also become unavailable:

Data screen	Tab	Action buttons
Terminals		Send config,
		Collect data, Config all,
		Collect all terminal
Terminals	Other	Status, Diagnose

'Invisible'

None of the function and action buttons can be used. The data screen cannot be opened and the data is therefore not visible. The menu option that opens the data screen is not visible.

The authorisation level for 'Tools' determines whether the menu options 'Import' and 'Export' are available in the menu 'File'.

On the administrator groups data screen, the record list is a list of all the administrator groups. From this screen you can view, create, edit, and delete administrator groups.

8.3.1 Creating an administrator group in the database

The data entry area of the administrator groups data screen shows a field with the name of the administrator group, and a list of the screens, menu options, tabs, action buttons, fields and activities for which the authorisation level must be defined. To create an administrator group, you will have to fill in the field 'Administrator group' and assign the authorisation level for each item of the list for which you want the authorisation level to be different from the default value ('Invisible').

The following screens, menu options, tabs, action buttons, fields and activities can be given a level of authority:

Data screens: Access groups, Administrator groups, Administrators, Card holders, Cards, Cost centres, Frame types, Locations, Machine suppliers, Machine types, Reports, Rights, Product groups, Products, Site options, Terminal groups, Terminals, Timetables, User groups, Workstations, Zones
Card service screen
Menu options: Tools
Tabs: 'Cardservice.tokens' for the tab 'Tokens' of the card service screen

'Card.card update (PIM)' for the tab 'Card update' of the cards data screen and the tab 'Servers' of the workstations data screen

'Collectors' for the tab 'Collector' of the workstations data screen (this defines whether an administrator of this group can control the use of the collectors from the tab 'Collector' of the workstations data screen (§8.4.1.2.1))

Action buttons: Card.delete tokens, Card.euroconvert, Card.hotlist, Card.issue, Card.new balance, Card.new batch, Card.new tokens, Card.read, Card.reissue, Card.return, Card.unblock, Card.write (the authorisation level given to this action button automatically also applies to the field 'Write batch' on the cards data screen), Cardservice.read, Cardservice.write, Terminals.collect all terminals, Terminals.Chipknip, Terminals.config all, Terminals.collect data, Terminals.ipaq, Terminals.USB, Terminals.send config

Fields: Card.webload password for the field 'Webload password' on the tab 'Salary Sacrifice/Autoload' of the cards data screen.

Activities:

'Card.rewrite cardnumber' without this authorisation you will not be able to write a card with card status 'personalised' with the action button Write from the cards data screen, unless it has just been read. You will see the message 'Card number is already in use. It is not allowed to write a second card with this card number'.

 'Cardservice.decrease' and 'Cardservice.increase' (these determine the availability and restriction in use of the fields 'Adjustment' and 'New balance' and of the action button Calculate of the tab 'Balance' of the Card service screen).

'Cardservice.pincode' determines whether you can change the PIN code of a card.

'Tools.run database script' determines whether you can use the menu options 'Run database script' and 'Database upgrade' from the menu 'File' and whether you will see only the machine types for reload terminals corresponding to the currency of the site or all the machine types for reload terminals on the machine types data screen.

How to create an administrator group:

1. Choose menu **Configuration**.
2. Choose **Administrator groups**. You will see the administrator groups data screen (Figure 8-12).
3. Click New.
4. Edit the field 'Administrator group'.
5. In the field 'Authorisation level', click the screen, menu option, tab, action button, field or activity for which you would like to change the authorisation level, so that the administrators of this administrator group can work with it.
6. Click the desired authorisation level for the item selected in step 5 for the administrators of this administrator group.
7. Repeat steps 5 and 6 for all the screens, menu options, tabs, action buttons, fields and activities that you want the administrators of this administrator group to have access to.
8. Click Apply.
9. Click OK. The new administrator group will be saved. The record list will include the name of this new administrator group.
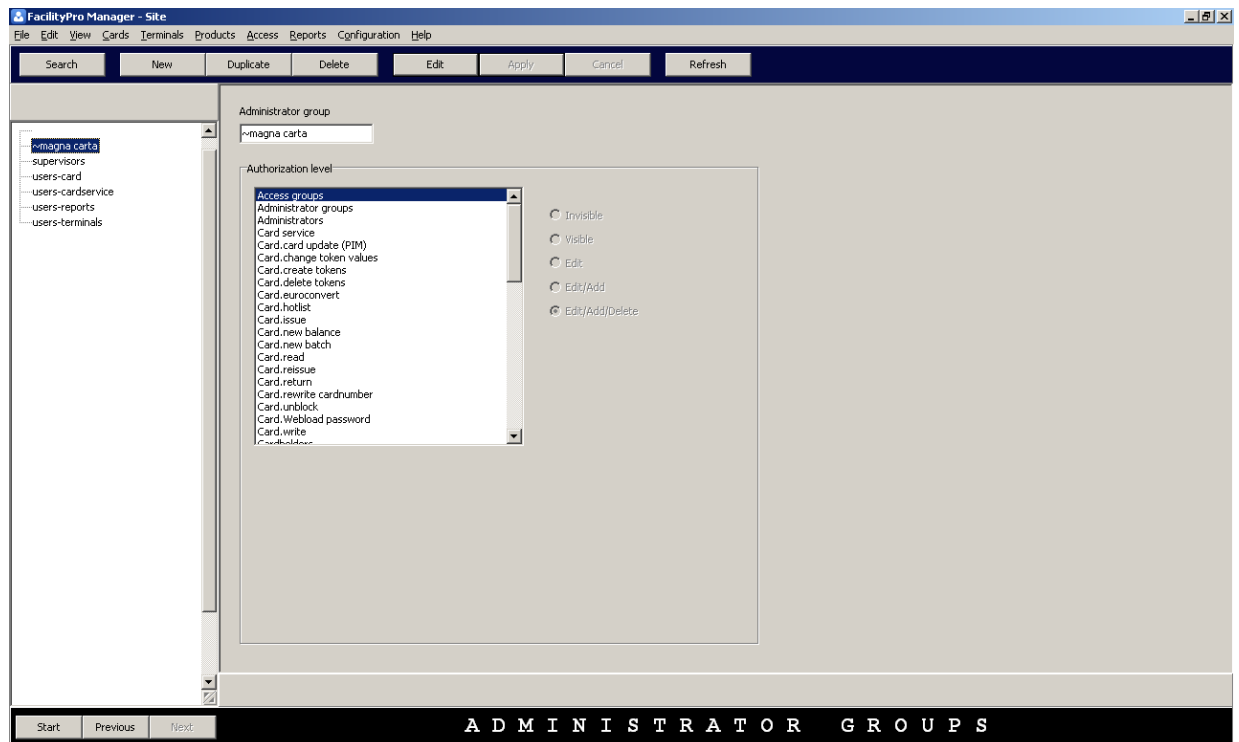
Figure 8-12 The administrator groups data screen

8.4 Workstations

A workstation is a computer on which FacilityPro Manager is used to manage the site. Sometimes there is only one workstation at a site. On larger sites, for instance sites spread over multiple buildings, or sites where each administrator is allowed to work with FacilityPro Manager from his own computer, there are several workstations. For each workstation of the site there is a record in the workstation table.

At the installation of FacilityPro Manager no workstations exist in the database. Whenever FacilityPro Manager is run from a PC that is not in the workstations table, FacilityPro Manager automatically creates that workstation, giving the workstation the name by which the computer is known to Windows. Certain data for that workstation will have to be entered, such as whether the workstation will be a collector, and if so how the collector must operate, and such as whether there is a PC card reader installed, and if so which kind.

On the workstations data screen, the record list is a list of all the workstations. From this screen you can view, create, edit, and delete workstations. In general you will not create workstations, as FacilityPro Manager creates them automatically.

The tabs of the workstations data screen

The workstations data screen has the tabs: 'Settings', 'Collector' and 'PC card reader'. One of these tabs will be the active tab, and you will always only see the data of the active tab on the screen. On each tab a different set of fields of a workstation can be viewed or edited. Above the tabs, at the top of the data entry area of the workstations data screen is one field: 'Workstation'. This field is therefore visible whichever is the active tab.

The tab 'Settings' contains the basic data of a workstation, and is discussed in §8.4.1.1.

You will normally use the tab 'Collector' only if the workstation is a collector, to set-up and control the way in which the collector will work. Instructions on how to do this can be found in §8.4.1.2.

You will use the tab 'PC card reader' only if you have connected a PC card reader to the workstation. How to work with this tab is explained in §8.4.1.3.

8.4.1 The tabs of the workstations data screen

The workstations data screen has multiple tabs, the use of which is described in the following paragraphs.

8.4.1.1 The tab 'Settings'

The fields of the data entry area of the workstations data screen (when the tab 'Settings' is active) are listed and explained below (Figure 8-13). The fields marked [*] must be assigned a value:

1) Workstation: the name of the workstation in the database.
2) Network name: the name by which Windows knows the computer used for this workstation. Clicking the action button Computer name at the bottom of the data entry area of the workstations data screen will return the name by which Windows knows the computer on which you are working.
3) Is collector: this check-box field must be checked if this workstation will have the collector function on this site.
4) Current admin: this is a read-only field, which shows which administrator is logged in to the selected workstation.
5) Open E-purse folder: if Chipknip cards are accepted on site and if the Chipknip collections are stored on this workstation, this field must contain the folder where the Chipknip collections are stored before being sent to Equens for processing, unless the folder is determined in the field 'Open E-purse folder' on the tab 'Settings' of the site (§8.1.1). If both fields are filled in, this field overrules the field 'Open E-purse folder' on the tab 'Settings' of the site.
6) TCP/IP timeout (ms): determines after how many ms FacilityPro Manager will consider a terminal unreachable if a network connection has not yet been successfully established. If connection to the terminal will be made through a telephonic network, whether GSM/mobile or PSTN/analogue, it might be necessary to enter a large value here of up to 10.000.
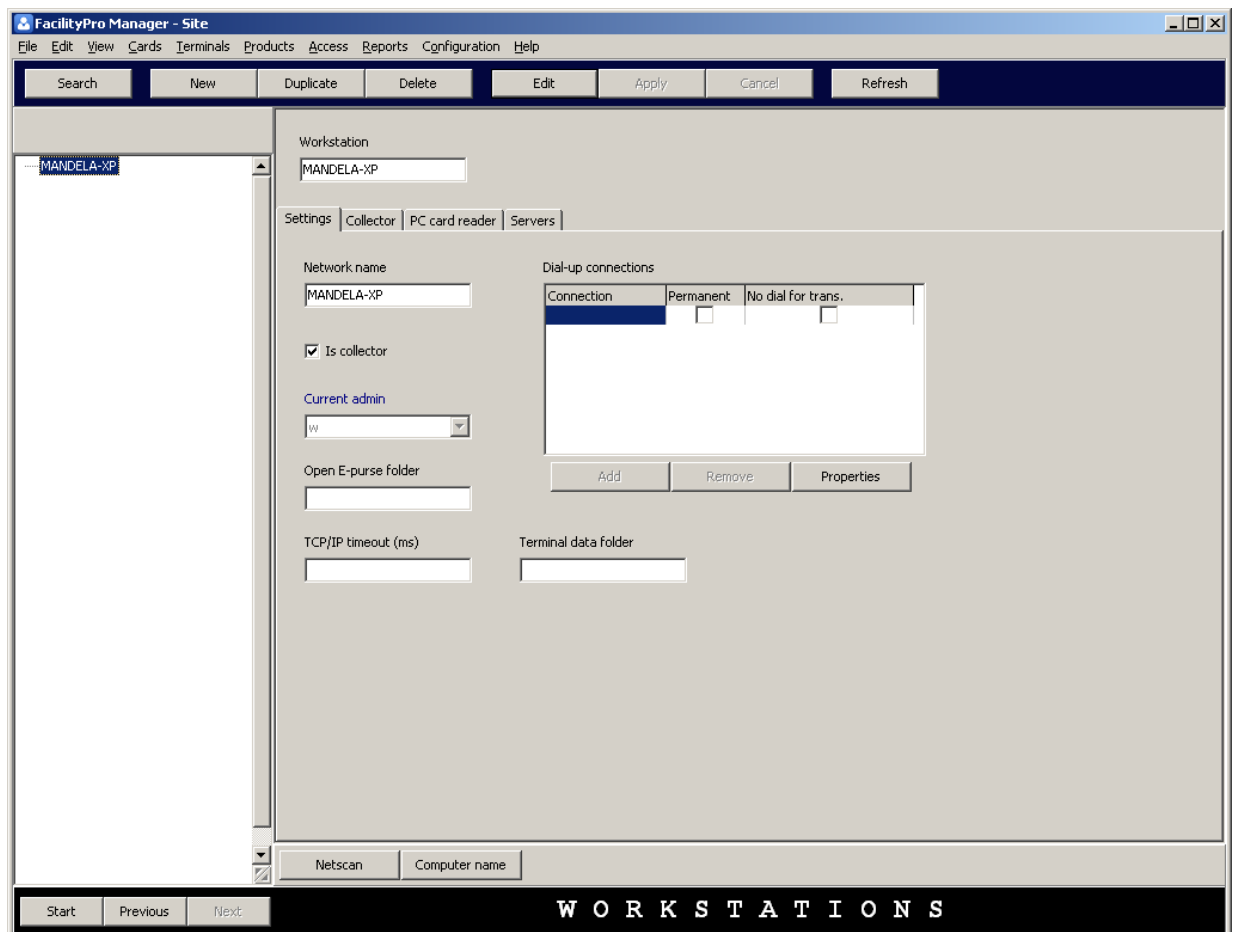
Figure 8-13 The tab 'Settings' of the workstations data screen

7) Terminal data folder: This field will be filled in if you want to determine a fixed folder on this workstation where the configuration and terminal data files are saved for terminals that are polled with a handheld or USB stick. For handhelds, this field will normally stay empty and FacilityPro manager will determine the folder where the configuration and terminal data files are saved for terminals that are polled with a handheld automatically, on the basis of which handheld is being used and the Windows login. This allows for several administrators and handhelds to be used for manual polling. For USB sticks, the path (drive letter) Windows assigns to access the USB stick must be entered. If this field is filled in it overrules the value of the field with the same name on the site options data screen.

8) Dial-up connections: a list of dial-up connections defined in Windows and known to FacilityPro Manager. There are two check-boxes for each connection:
   o Permanent: if this is checked the dial-up connection will not be closed by FacilityPro Manager once a connection is made. The connection can only be ended manually by the user using Windows.
   o No dial for trans.: if this is checked FacilityPro Manager will not build up a connection only to read transactions from a terminal. This results in terminals using this dial-up connection only being polled once a day, or less depending on the value of the parameter 'Scheduler for data collection' (§8.4.1.2.4).

In general you will not create workstations, as FacilityPro Manager creates them automatically. You will generally only edit the data on the tab settings to activate the collector

function of a workstation (by checking the check-box field 'Is collector'), and/or to change the name of the workstation in the database.

How to add a dial-up connection to the database:

1. Choose menu **Configuration**.
2. Choose **Workstations**.
3. Click Edit.
4. On the tab 'Settings' of the workstations data screen, click Add the. You will see a list of dial-up connections known in Windows.
5. Select a dial-up connection.
6. Click Add. The dial-up connection is now visible in the list of dial-up connections for this workstation.
7. Edit the fields 'Permanent' and 'No dial for trans.' if desired.
8. Click Apply.
9. Click OK.

8.4.1.2 The tab 'Collector'

The tab 'Collector' will only be visible if a workstation if selected for which the check-box field 'Is collector' is checked (§8.4.1.1), i.e. for a workstation that performs the collector function on the site. Depending on the level of authorisation for the tab 'Collector' that has been given to the administrator group to which you belong, this tab will not be visible on your screen, or you will not be able use all the action buttons (§8.3). On the tab 'Collector' you can view and edit a number of fields of the workstation that is a collector. These fields determine how the collector will operate. For all workstations that do not perform as a collector, the fields of the tab 'Collector' will be blank. The tab 'Collector' also has a number of action buttons that are used to control the collector.

The fields of the tab 'Collector' of the data entry area of the workstations data screen (Figure 8-14) are listed and explained below:

1) Interval (hh:mm): the period after which the collector starts a new poll round. With a value of 1:00, this workstation will connect to the terminals through the network every hour to collect transaction data and send configuration data.
2) Collection time: used to determine at which time the counters will be collected as well as the transactions. If this field has no value, collection time will be 00:00:00, i.e. midnight, by default.
3) Start time (hh:mm): the time the collector will start polling each day. If this field has no value, start time will be 00:00:00, i.e. midnight, by default.
4) End time (hh:mm): the time the collector will stop polling each day. If this field has no value, polling will be continuous once started.
5) Terminal delay (sec): the time the collector will wait between polling two terminals within a poll round. A value of 10 means the collector will pause for 10 seconds after communication with one terminal is ended, before seeking communication with the next terminal. A pause is necessary to prevent network disturbances.
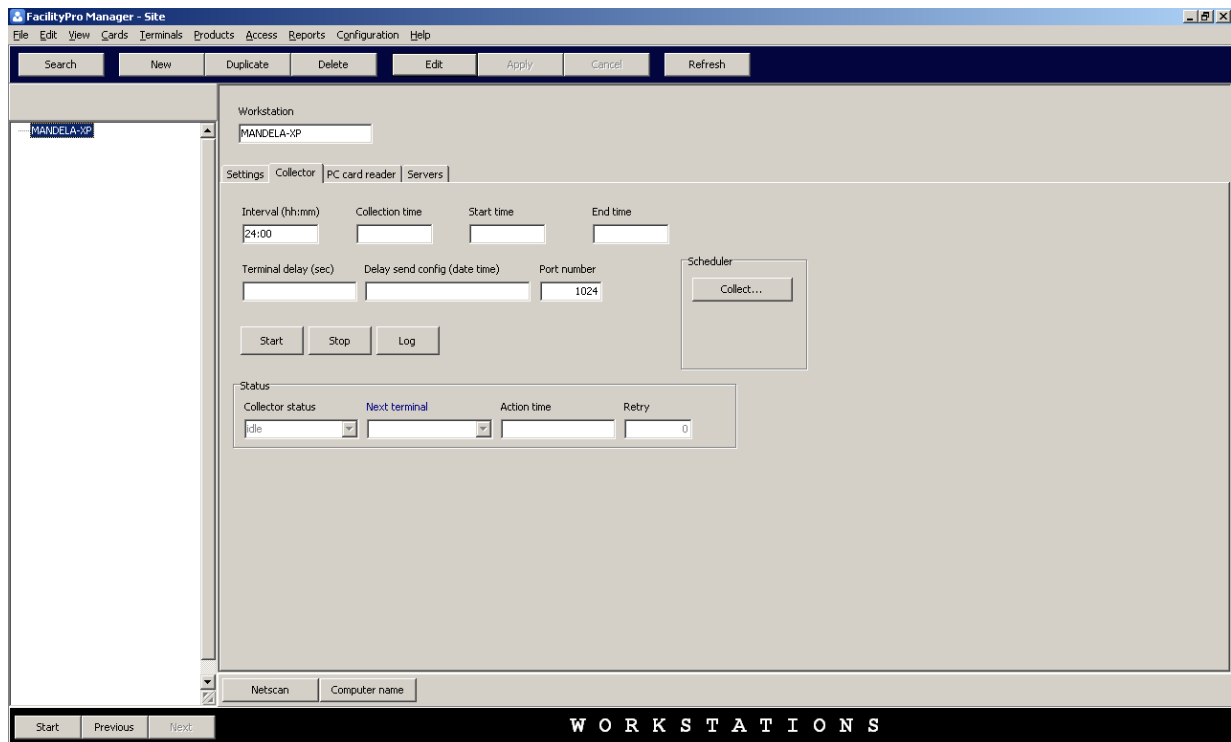
Figure 8-14 The tab 'Collector' of the workstations data screen

6) Delay send config (date time): if this field is given a value (date and time), no changes in the configuration, except the hotlist, will be transmitted to the terminals until that date and time. The collector will only collect data from the terminals and send the hotlist during polling until that date and time. You might use this field if you have changed the prices of certain products, but do not want the price changes to take effect until a later date.

7) Port number[*]: you must fill in an available port number for communication. The default value is '1024'.

8) Status (these four fields are read-only):
   - Collector status: In this field you can read the status of the collector. Table 8-1 below shows you which values status can have and what each value means.
   - Next terminal: the value of the field 'terminal ID' of the next terminal that will be polled.
   - Action time: the time at which the collector will poll the next terminal.
   - Retry: if a collector cannot connect to a terminal, it retries it two more times. In this field you will read the number of the current attempt (0, 1, or 2).

Status	Means
''	Collector not started.
'waiting'	The collector has no connection with a terminal. This status occurs between poll rounds, during the period of the terminal delay (see above) and when an administrator is logged in to FacilityPro Manager on the collector workstation.
'Getting terminal data'	The collector is getting terminal data from the terminal.
'Sending config'	The collector is sending the configuration data to the terminal.

Table 8-1 The possible statuses of a collector

8.4.1.2.1 The action button Start

With the action button Start you will start the collector. After starting the collector it will stay on indefinitely, until polling is stopped by hand with the action button Stop. When you click Start you will see the following message 'The collector will start when you are logged out.'. This is because it is not wise to let the collector run whilst an administrator is editing the data in the database. The collector will start a poll round as soon as you log out and the login screen appears, and again after each loop period. As long as the collector is running, the login screen will remain visible on the screen of that workstation. You will not be able to log out of FacilityPro Manager completely, if the collector is running.

Note: The collector can be started automatically by starting FacilityPro Manager with the command line switch '/start'. For example 'c:\FacilityPro\bin\FACILITYPRO.exe /start'.

8.4.1.2.2 The action button Stop

With the action button Stop you stop the collector polling the terminals, until the collector is manually started up again with the action button Start.

Note: The collector can be stopped without starting the main program. To stop the collector you will have to enter your login name and password on the login screen, and then clicking Exit. You will see the message 'Collector still active, stop it?' and must click Yes to stop the collector. Of course you will need to be authorised to control the collector to be able to do this (§8.3.1).

8.4.1.2.3 The action button Log

Clicking on the action button Log will show you the results of all previous polling on the collector log screen (Figure 8-15). The results of all the actions of the collector are stored in two tables of the database, the collector log table and the collector error log table. The collector log screen shows you the contents of these tables.
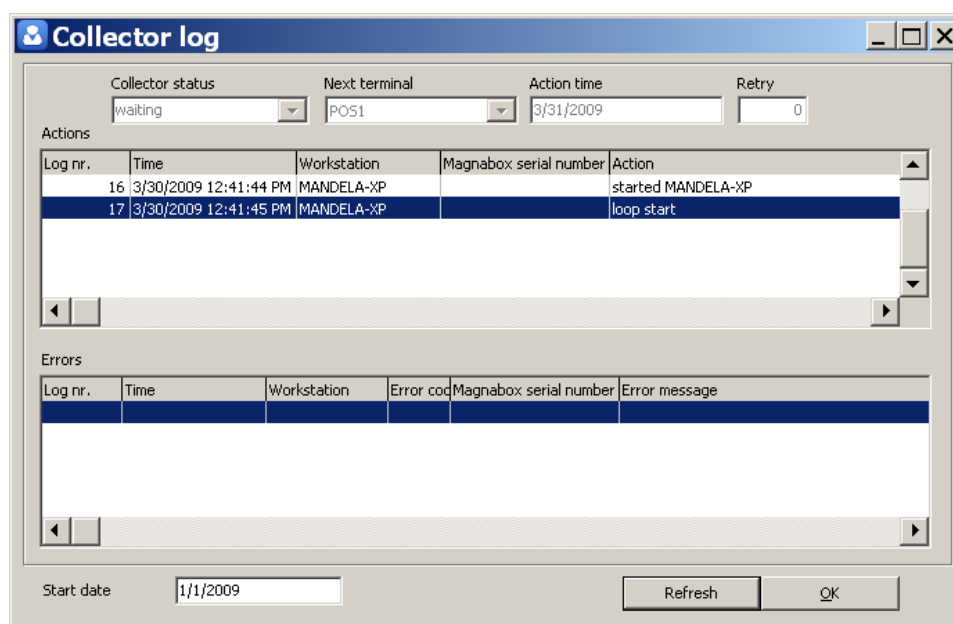
Figure 8-15 The Collector Log screen

The fields of the collector log screen are listed and explained below:

1) Log nr.: the number of the record in the collector log table or collector error log table.
2) Time: the time the logged event occurred.
3) Workstation: the workstation at which the logged event occurred.
4) Error code: the value of this field tells you what type of error occurred.
5) Magnabox serial number: the serial number of the Magnabox of the terminal at which the logged event occurred.
6) Action: the value of this field contains the name of the logged event. Table 8-2 below shows you which values this field can have and what each value means.

Action	Means
'Interim counters'	The data was collected from the counters in the terminal
'hotlist'	Hotlist was sent
'Open E-purse collection'	Open e-purse collection was done
'config'	Configuration was sent
'error'	An error occurred. A log of this error is stored in the collector error log table and is visible in the lower part of the collector log screen
'loop end'	A poll round was completed
'loop start'	A poll round was started
'collection'	A terminal was polled
'powerdown'	The collector stopped because the time defined in field 'End time (hh:mm)' was reached
'powerup'	The collector started because the time defined in field 'Start time (hh:mm)' was reached
'failed collection'	Too many retries while polling

Action	Means
	terminal. A log of this error is stored in the collector error log table and is visible in the lower part of the collector log screen
'started [workstation]'	Collector was started on [workstation]
'stopped [workstation]'	Collector was stopped on [workstation]

Table 8-2 The possible values of the field 'Action' of the collector log screen

7) Error message: the value of this field explains the logged error. Table 8-3 below shows you which values this field can have and what each value means.

Error message	Means
'Can not access this terminal: [IP address]'	A network connection to this terminal could not be made
'Terminal has incorrect address'	IP address for this terminal was not entered
'Wrong serial number found on this IP address'	The serial number of the Magnabox at this IP address does not correspond to the serial number in the database for this terminal

Table 8-3 The most common values of the field 'Error message' of the collector log screen

Each time you click Refresh will the collector log screen will be updated and include the results of the polling up to that time. Click OK to close the screen.

8.4.1.2.4 The action buttons Collect… and Open E-purse…

The collector carries out a poll round at predefined times (§8.4.1.2, field 'Loop period (hh:mm)'), several times a day (e.g. every hour), whereby it seeks connection with all the terminals which have a network connection (for other terminals the polling is done manually with a handheld). At each poll round the collector collects the transaction data from the terminals. Less frequently, e.g. once a day it also carries out a more extensive poll, also collecting the data from the Magnabox counters. These counters include turnover per product, per user group, number of transactions, etc. The interim and cumulative counters are collected, and the interim counters are reset (the interim counters keep track of data since the previous collection of data from the counters).

You will use the action button Collect… to determine how often a poll round will result in the counters being collected from the terminals by the collector, as well as the transaction data. The standard setting is once per day. But it can also be set to once a week, whereby you must define on which day of the week, or to once a month, whereby you must define on which date of the month. It is not possible to schedule the collection of the data from the counters more than once per day, and it will normally be executed at 00:00 hours (midnight) or as soon as the collector has become active on the date scheduled.

The action button Open E-purse… is only applicable to sites where Chipknip cards are accepted. It works in the same way as the action button Collect….

How to change the frequency of the extensive data collections:

1. Choose menu **Configuration**.
2. Choose **Workstations**.
3. Select the workstation that acts as the collector.
4. Click the tab 'Collector'.
5. Click Edit.
6. Click Collect… Under the word 'Scheduler'. You will see the collection scheduler dialog screen (Figure 8-16).
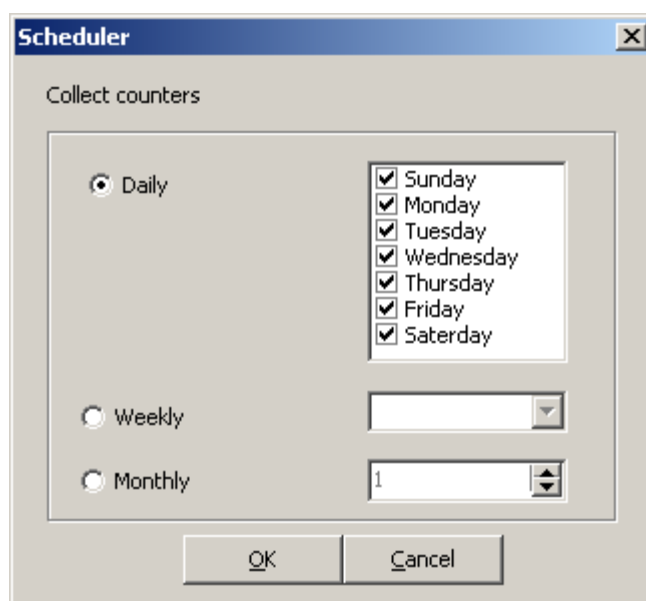
Figure 8-16 The dialog screen of the action button Terminal data…

7. Select the radio button 'Daily' and check the boxes of the days you wish the counters to be collected, or select the radio button 'Weekly', and then click the arrow and select the day of the week that you want the counters to be collected, or select the radio button 'Monthly', and then click one of the arrows to define the date of the month that you want the counters to be collected.
8. Click OK.
9. Click Apply.
10. Click OK. The edited workstation will be saved.

8.4.1.3 The tab 'PC card reader'

Your PC card reader must be prepared for FacilityPro cards by Magna Carta or your local FacilityPro supplier. FacilityPro is the 'closed' smartcard payment system developed by Magna Carta.

On each workstation of a site a PC card reader will or will not be connected, depending on whether the administrator working on that workstation will need to read and or write FacilityPro cards. You can connect only one PC card reader on a workstation.

To use a PC card reader to read or write cards, you will first have to connect it to your workstation (see the FacilityPro Manager Installation Manual) and then enter the data on the tab 'PC card reader' of that workstation, as described below.

How to fill in the tab 'PC card reader':

1. Choose menu **Configuration**.
2. Choose **Workstations**.
3. Select the workstation for which you want to enter the data of the PC card reader.
4. Click the tab 'PC card reader'. You will see the tab 'PC card reader' (Figure 8-17)
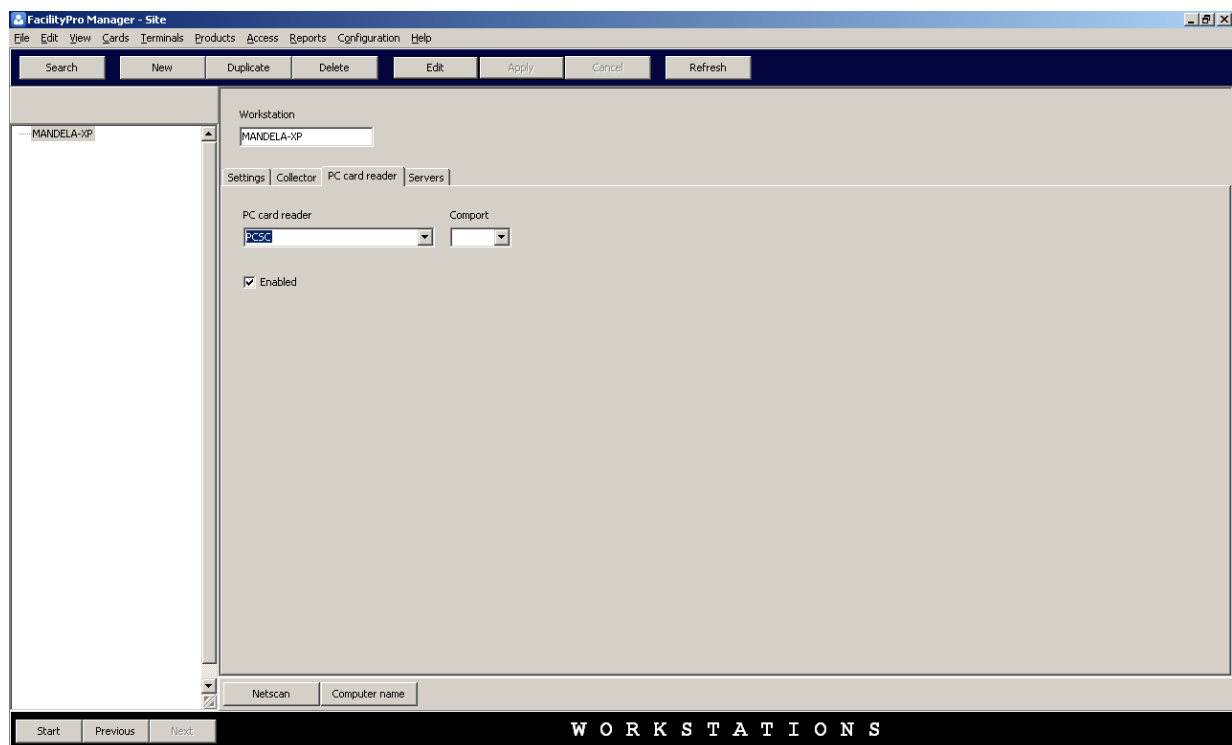
Figure 8-17 The tab 'PC card reader' of the workstations data screen

5. Click in the check-box 'Enabled' to check it and activate the PC card reader for that workstation.
6. Click the arrow next to the field 'Reader' and select the type of PC card reader you have connected. The PC card readers supported by FacilityPro Manager require the value 'PCSC' in this field.
7. Click Apply.
8. Click OK. The edited workstation will be saved.

For further instructions see your PC card reader user manual.

8.4.1.4 The tab 'Servers'

The tab 'Servers' (Figure 8-18) allows you to view the activities of the Autoload (ALS) and Card update (PIM) servers. The results of all the actions of the servers are stored in a table of the database, the ALS log table. The tab 'Servers' shows you the contents of this table, whereby you can choose to view the activities of only one of the servers or both by selecting the desired value in the field 'Show server type' from the drop-down list. You can determine the period for which you want the server log to be shown by filling in the fields 'Start date' and 'End date'. The log entries are shown in chronological order.

The fields of the server log screen are listed and explained below:

1) Time stamp: the exact date and time the logged event occurred
2) Card number: the number of the card affected by this event. If no card is affected a 0 is shown
3) Balance: where applicable, the amount that was in the e-purse of the card before the balance increase is effected
4) Action: the value of this field explains the logged event. Table 8-4 below shows you which values this field can have and what each value means

Action	Type	Description of action
'1'	ALS inquire	A card was inserted in an autoload terminal and the terminal asks whether there is an amount in the field ALSACCOUNT for this card
'2'	ALS reply	The ALS server responds to the inquiry with a positive amount or with a 'no' (0)
'3'	ALS finish	The terminal has successfully reloaded the card
'6'	ALS import	A line with card number and amount was imported from an ALS Export file
'7'	Server start	The ALS server was started
'8'	Server stop	The ALS server was stopped
'21'	PIM inquire	A card was inserted in a PIM terminal and the terminal asks whether there is a PIM action pending for this card
'22'	PIM reply	The PIM server responds to the inquiry with a 'yes' (1) or a 'no' (0)
'23'	PIM data	The terminal sends the card configuration of the inserted card to the PIM server
'24'	PIM new data	The PIM server sends back the configuration the card should have after the change pending in the PIM server
'25'	PIM finish	The terminal has successfully rewritten the card
'27'	PIM start	The PIM server was started
'28'	PIM stop	The PIM server was stopped
'29'	PIM info	Information about the server, for instance errors

Table 8-4 The possible values of the field 'Action' of the Servers log screen

8) Type: a short description of the action. Table 8-4 above shows you which values this field can have and gives a longer description of the action as well
9) Amount: for a PIM reply (Action = 22) this will show the value 0 or 1; for a PIM new data, PIM finish, ALS reply and ALS finished (Action = 2, 3, 24 or 25) this is the reload amount.

10) ALS account: the amount ready to be credited to the card (can be the sum of various imports)
11) Account nr: an ALS account can exist for crediting the balance in the e-purse (Account nr = 1) or the counter of a token (Account nr = 2)
12) Message: description of error or other info
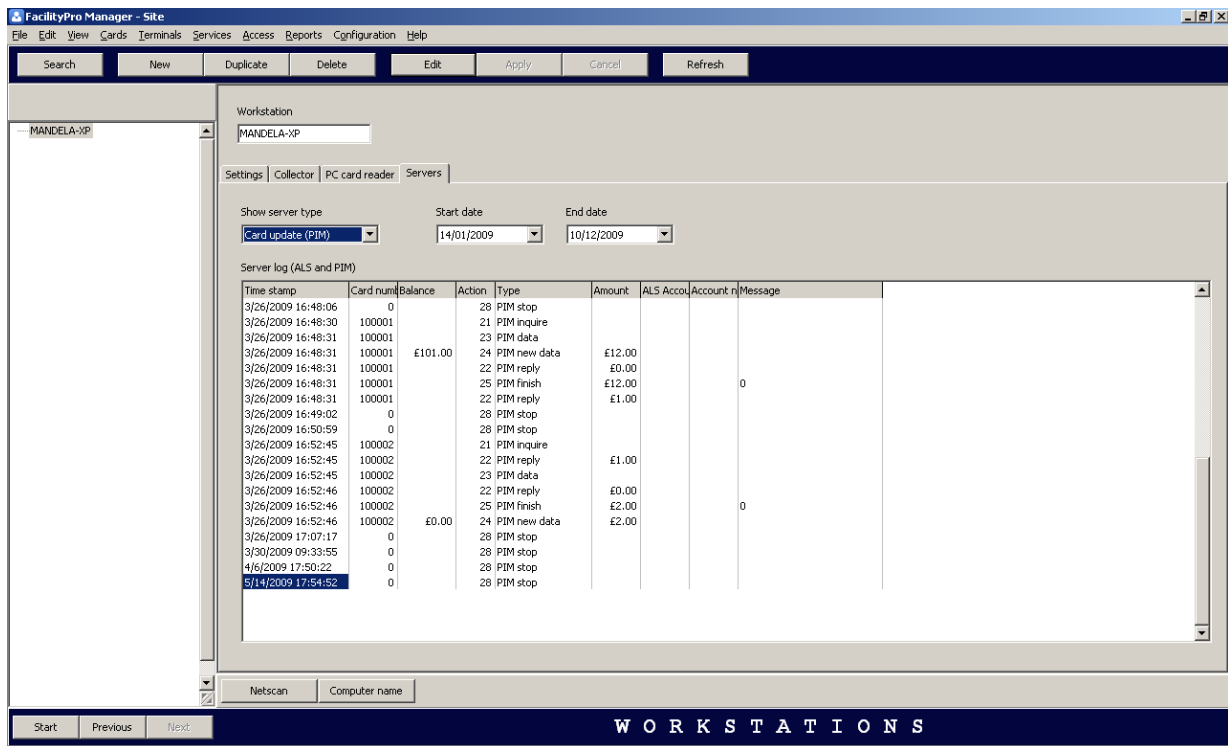
Figure 8-18 The tab 'Servers' of the workstations data screen

8.4.2 The action buttons of the workstations data screen

At the bottom of the workstations data screen there are two action buttons, which are explained in the two paragraphs below.

8.4.2.1 The action button Netscan

The action button Netscan is used to check which terminals are connected to the network. You define which terminals must be checked for connection. If you define that all terminals on the site must be checked, Netscan will result in a list of IP-addresses of the terminals that will be polled at a poll round. It can also be used to check whether one or several specific terminals are connected to the network.

FacilityPro Manager performs a netscan by sweeping the list of IP-addresses, starting with the IP-address defined in the field 'Start IP-address' of the netscan dialog screen, and checking as many consecutive IP-addresses as defined in the field 'Number' of the netscan dialog screen. FacilityPro Manager sends a short ping to each of these IP-addresses and checks for an answer from the terminals within the time defined in the field 'Timeout' (in milliseconds) of the netscan dialog screen. An example of the result of a netscan could be:

```
                        ------------------------
IP-address ──► 192.168.2.100
               192.168.2.101
               -----------------------2
                                       ▲
                                       │
                                       │
        number of terminals found on the network
```

How to perform a netscan:

1. Choose menu **Configuration**.
2. Choose **Workstations**.
3. Click Netscan. You will see the netscan dialog screen (Figure 8-19).
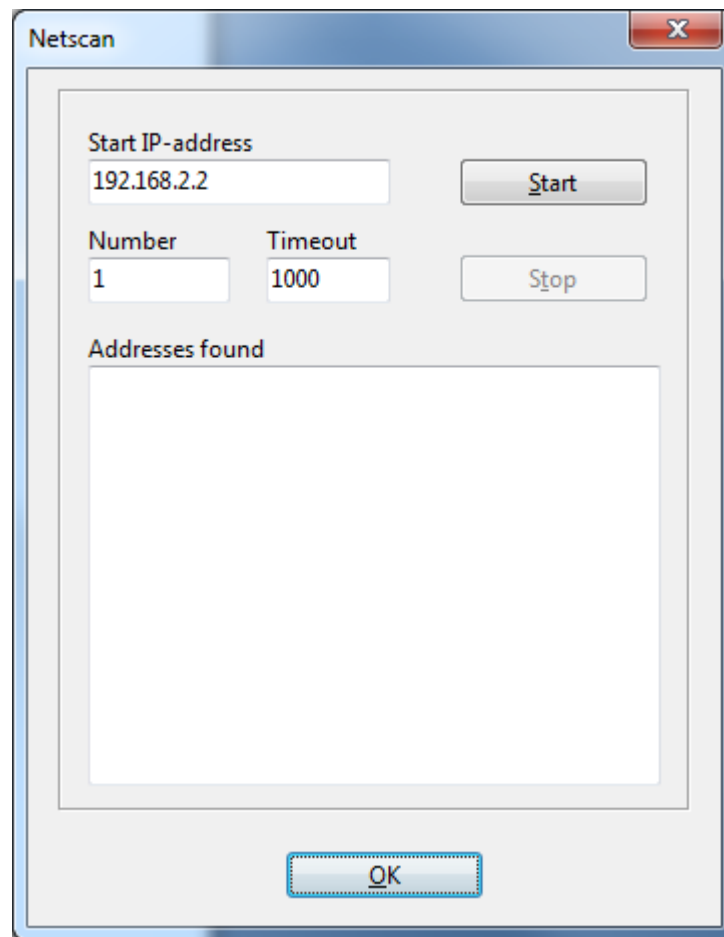
Figure 8-19 The Netscan dialog screen

4. Double-click in the field 'Start IP-address'.
5. Type the IP-address that you want the netscan to begin with. If you are only interested in checking one specific terminal, you will type the IP-address of that terminal. If you want to check all terminals on the site, you must type the lowest IP-address on the site.
6. Double-click in the field 'Number'.

7. Type the number of consecutive IP-addresses that you want the netscan to sweep, including the IP-address entered in step 5. If you are only interested in checking the specified IP-address you will leave the default value '1'. If you want to check all terminals on the site, you must type a value that is at least equal to the highest IP-address on site minus the lowest IP-address on the site, plus one.

8. If you want to change the value of the field 'Timeout' from the default value of 300 milliseconds, double-click in the field and type the desired value.

9. Click Start. You will see the result of the netscan in the field 'Addresses found' of the netscan dialog screen.

10. Click OK.

8.4.2.2   The action button Computer name

Computer name: This action button returns the name by which Windows knows the computer (workstation) you are presently working on.

8.5   Timetables

When a card is used at a payment terminal, the terminal must determine whether the rights that are represented by the tokens on that card, are valid at that time. This is determined by evaluating the timetables that have been assigned to the field 'Valid timetable' of those rights. The terminal must also determine whether it must reset the counter of the repeating subsidy rights or discount rights. For example in the case of the discount right <free coffee >, which gives the right to 5 free coffee a day, the terminal must determine whether a day has gone by since the 'free-coffee-counter' was last reset. It does so by evaluating the timetables that have been assigned to the field 'Preset timetable' of those rights.

When a card is used at an access terminal, the terminal must check whether its access list contains the card number and whether the timetable coupled to that card number on the access list (if any) allows or prohibits granting access at that time.

The result of evaluating a timetable is always either 'positive' or 'negative'. If the result is 'positive', the right is valid, or the counter has to be reset, or access should be granted. If the result is 'negative', the right is not valid, or the counter does not have to be reset, or access must be refused.

There are two types of timetables:

1) **Valid timetables**
These are used in payment terminals to determine whether a right is valid at the time the card is presented (§5.4.1) and in access terminals to determine whether there is free access at that terminal (§4.1.2.2) or whether a card on the access list of that terminal may be granted access at the time the card is presented (§6.2.1). For example: lecturers and administrative personnel (PERS-LA) can make a maximum of 500 free copies per day. In order to avoid misuse of this right we will say these copies may only be made between 7 am and 7 pm. We will create a timetable to define the period from 7 am to 7 pm.

2) **Preset timetable**

These are used to determine a period after which a repetitive right is repeated (§5.4.1). For example: lecturers and administrative personnel (PERS-LA) can make a maximum of 500 free copies per day. After each 24 hours the counter for that right must be reset to 500. We will create a timetable defining the period of 24 hours.

We also distinguish between simple and composed timetables, which we call signal timetables and expression timetables. The timetables discussed in the above examples are both signal timetables. Expression timetables are combinations of signal timetables, where two signal timetables are combined using a logical expression as explained later in this paragraph. An expression timetable is used when the time period that must be defined is too complex to define in a signal timetable. Expression timetables cannot be used as preset timetables.

On the timetables data screen, the record list is a list of all the timetables. From this screen you can view, create, edit, and delete timetables. When FacilityPro Manager is installed, the database contains a number of pre-defined timetables.

Below you will find instructions for creating signal timetables, based on the examples above. You will also find instructions for creating another example signal timetable and for creating an expression timetable.

8.5.1 Creating a timetable in the database

The fields of the data entry area of the timetables data screen are listed and explained below. The fields marked * must be assigned a value:

1) Timetable: the name of the timetable. If the timetable is to be a preset timetable, we recommend including the word 'preset' in the name of the timetable.
2) For presetting a right: this is a checkbox which must be checked if the timetable is to be used as a preset timetable.
3) Start date: This field should only be filled in for a signal timetable. It is the date on which the period defined in the first row of column 'Period' of the field 'Periods (dd:hh:mm)' (see below) will start. For an expression timetable no value can be given to this field, as the start date of the expression timetable is determined by the start dates of the two signal timetables that make up the expression timetable.
4) Start time: This field should only be filled in for a signal timetable. It is the time at which the period defined in the first row of column 'Period' of the field 'Periods (dd:hh:mm)' (see below) will start. For an expression timetable no value can be given to this field, as the start time of the expression timetable is determined by the start times of the two signal timetables that make up the expression timetable.
5) Type: this field will either have the value 'Signal timetable' or 'Expression timetable'.
6) Periods (dd:hh:mm): This field will only be filled in for a signal timetable. The field 'Periods (dd:hh:mm)' is a table with two columns and seven rows. Each row of the column 'Period' defines a period in time. The period in the first row starts on the date entered in the field 'Start date' at the time entered in the field 'Start time'. The period in each subsequent row starts when the period of the previous row ends. In each row,

the value in the column 'Active period' defines for which section of the period defined in the column 'Period' of that row the timetable is valid, and evaluation of the timetable will therefore be positive. For a preset timetable the values of the column 'Active period' should always be filled in as '0:0:1'. All data in the table 'Periods (dd:hh:mm)' is filled in with the format dd:hh:mm, standing for days, hours and minutes. Below, you will find some examples of how the table 'Periods (dd:hh:mm)' can be filled in.

7) Operator: This field will only be filled in for an expression timetable. The field has three parts. Two to define the two signal timetables used for this expression timetable and one to define which logical operator is used to combine these two signal timetables: 'AND', 'OR' or 'XOR'. For further explanation see the section on expression timetables later in this paragraph.

8) Repeating: This field is a check-box, which should be checked if the periods defined in the column 'Period' of the field 'Periods (dd:hh:mm)' should repeat over time. For an expression timetable this field can not be checked, as the repetitiveness of the expression timetable is determined by the repetitiveness of the two signal timetables that make up the expression timetable.

To create a timetable, fill in the relevant fields.

Some examples of possible values in the table 'Periods (dd:hh:mm)':

The following table means: 'each day the whole day', if 'Repeating' is checked.

Period	Active period
1:0:0	1:0:0

The next table means: 'only on working days from 6 am to 10 am. 'Start date' must be set to a Monday and 'Start time' to 6:00:00. 'Repeating' must be checked.

Period	Active period
1:0:0	0:4:0
1:0:0	0:4:0
1:0:0	0:4:0
1:0:0	0:4:0
1:0:0	0:4:0
1:0:0	0:0:0
1:0:0	0:0:0

The next table means: 'during the 5 days of the course from 9 am to 6 pm'. 'Start date' must be set to the first day of the course and 'Start time' to 9:00:00. 'Repeating' must not be checked.

Period	Active period
0:24:0	0:9:0
0:24:0	0:9:0
0:24:0	0:9:0

0:24:0	0:9:0
0:24:0	0:9:0

The next table means: 'during breaks'. The breaks are from 11 am to 11:15 am and from 3 pm to 3:15 pm every day. 'Start time' must be set to 11 am. 'Repeating' must be checked.

Period	Active period
0:4:0	0:0:15
0:20:0	0:0:15

The next table means: 'once a year' and can be used for a preset timetable. Start date must be set to the first day of a leap year. 'Repeating' must be checked.

Period	Active period
366:0:0	0:0:1
365:0:0	0:0:1
365:0:0	0:0:1
365:0:0	0:0:1

Careful study of the above examples will help you understand how the table in the field 'Periods (dd:hh:mm)' can be used to define a timetable.

How to create a valid timetable, example 1 (signal timetable):

We will use the following example: the user group PERS-LA have the right to make free copies from 7 am to 7 pm. Of course we have to define a timetable. We can define a repeating 'Period' of one day, with an 'Active period' of 12 hours.

1. Choose menu **Configuration**.
2. Choose **Timetables**. You will see the timetables data screen (Figure 8-20).
3. Click New.
4. Click in the field 'Timetable' and type the name of the timetable **'Daily from 7 am to 7 pm'**.
5. Double-click in the field 'Start date'.
6. Type the date on which the timetable must start (e.g. **'01-01-2000'**).
7. Double-click in the field 'Start time'.
8. Type the time at which the timetable must start **'07:00'**.
9. Click in the field which is the first row in the column 'Period' of the table 'Periods (dd:hh:mm)'.
10. Type **'1:0:0'**. This represents one day.
11. Click in the field of the column 'Active Period' in the same row.
12. Type **'0:12:0'**. This represents 12 hours, namely from 7 am to 7 pm.
13. Click in the check-box 'Repeating'. 'Repeating' will be checked.
14. Click Apply.
15. Click OK. The timetable will be saved. The record list will include the name of this new timetable.
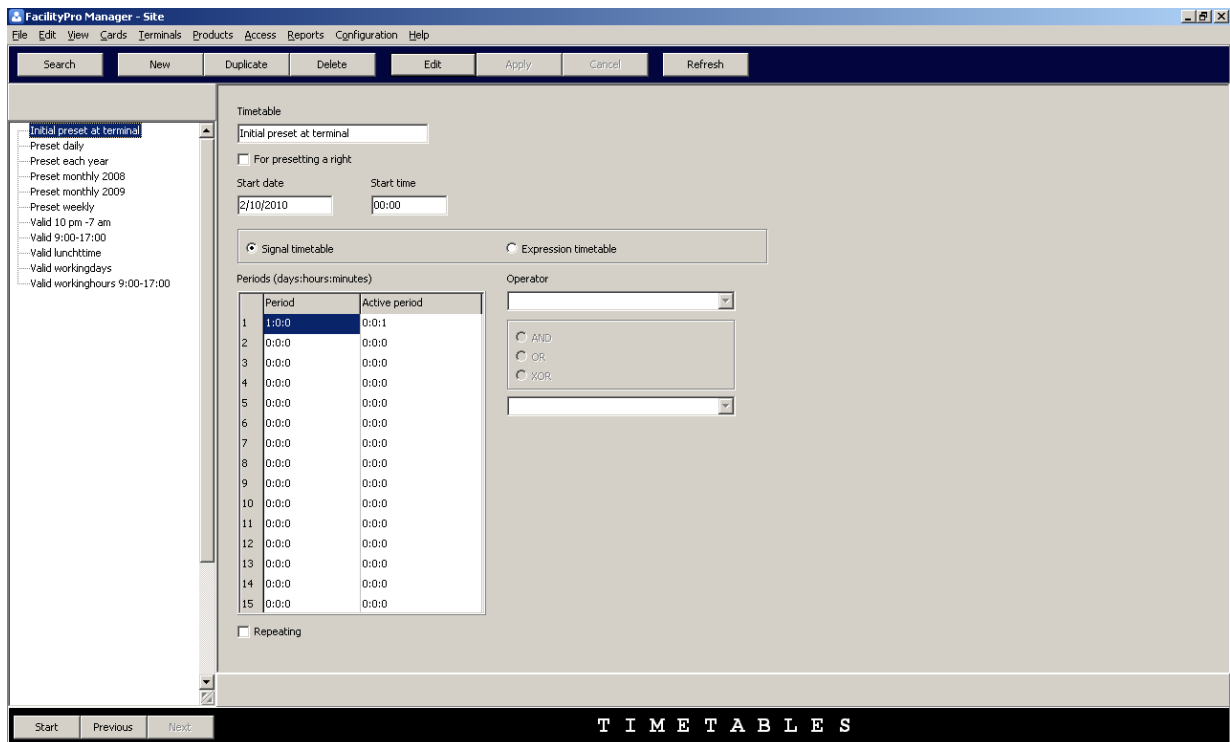
Figure 8-20 The timetables data screen

How to create a valid timetable, example 2 (signal timetable):

We will use the following example: we want to create a timetable which will only be evaluated as positive if the day is a weekday, for which we will have to choose a repeating 'Period' of 7 days and an 'Active period' of 5 days.

1. Choose menu **Configuration**.
2. Choose **Timetables**. You will see the timetables data screen (Figure 8-20).
3. Click New.
4. Click in the field 'Timetable' and type the name of the timetable **'Monday to Friday'**.
5. Double-click in the field 'Start date'.
6. Type the date on which the timetable must start. This must be a Monday (e.g. **'06-01-2003'**).
7. Double-click in the field 'Start time'.
8. Type the time at which the timetable must start **'00:00'**.
9. Click in the field which is the first row in the column 'Period' of the Table 'Periods (dd:hh:mm)'.
10. Type **'7:0:0'**. This represents seven days.
11. Click in the field of the column 'Active Period' in the same row.
12. Type **'5:0:0'**. This represents 5 days, namely from Monday to Friday.
13. Click in the check-box 'Repeating'. 'Repeating' will be checked.
14. Click Apply.
15. Click OK. The timetable will be saved. The record list will include the name of this new timetable.

How to create a preset timetable, example 3 (signal timetable):

We will use the following example: Lecturers and administrative personnel have the right <free copies>. To reduce risk in case of lost or stolen cards, we will limit this right to a maximum of 500 free copies a day. This means that after every 24 hours the counter for that right must be reset to 500. We do not need to define a valid timetable for this right as the right will always be valid. But we must define a preset timetable for this right, which defines a repeating 'Period' of one day. When a transaction occurs where this right is used, FacilityPro Manager will determine whether a preset period has passed since the counter was last reset. The column 'Active Period' is not used for preset timetable, but must be more than zero. It is usually set to one minute (0:0:1).

1. Choose menu **Configuration**.
2. Choose **Timetables**. You will see the timetables data screen (Figure 8-20).
3. Click New.
4. Click in the field 'Timetable' and type the name of the timetable, e.g. **'Preset every day'**. Tip: we recommend including the word 'preset' in the name of all preset timetables.
5. Click in the check-box 'For presetting a right' to check it.
6. Double-click in the field 'Start date'.
7. Type the date on which the timetable must start, e.g. **'01-01-2003'**.
8. Double-click in the field 'Start time'.
9. Type the time at which the timetable must start **'00:00'**.
10. Click in the field which is the first row in the column 'Period' of the Table 'Periods (dd:hh:mm)'
11. Type **'1:0:0'**. This represents one day.
12. Click in the field of the column 'Active Period' in the same row.
13. Type **'0:0:1'**. This has no actual meaning, but a positive value must be assigned to this field (see above).
14. Click in the check-box 'Repeating'. 'Repeating' will be checked.
15. Click Apply.
16. Click OK. The timetable will be saved. The record list will include the name of this new timetable.

Expression timetables

Expression timetables are combinations of signal timetables, where two signal timetables are combined with a logical operator: AND, OR or XOR. In expression timetables these logical operators have the following meaning:

AND: the expression timetable is valid if both signal timetables are valid.

OR: the expression timetable is valid if one or both of the signal timetables are valid.

XOR: the expression timetable is valid if either one of the signal timetables is valid, but not if they are both valid.

How to create a valid timetable, example 4 (expression timetable):

We will use the following example: the user group PERS-LA can make free copies on working days from 7 am to 7 pm. We can express this as free copies may be made if it is between 7 am and 10 pm <u>and</u> the day is a working day'. Earlier in this paragraph we created valid timetables for 'Daily from 7 am to 7 pm' and for 'Monday to Friday'. We can now create an expression table for 'Weekdays from 7 am to 7 pm', by combining the two signal timetables with the logical operator AND.

1. Choose menu **Configuration**.
2. Choose **Timetables**. You will see the timetables data screen (Figure 8-20).
3. Click New.
4. Click in the field 'Timetable' and type the name of the timetable **'Weekdays from 7 am to 7 pm'**.
5. Select the radio button 'Expression timetable'.
6. Click the arrow next to the first empty field of the field 'Operator'. You will see a list of all existing timetables.
7. Select **'Monday to Friday'** (if the list of timetables is very long, you might have to scroll down the list to find this timetable).
8. Select the radio button 'AND' to select the logical operator AND.
9. Click the arrow next to the second empty field of the field 'Operator'. You will see a list of all existing timetables.
10. Select **'Daily from 7 am to 7 pm'** (if the list of timetables is very long, you might have to scroll down the list to find this timetable).
11. Click Apply.
12. Click OK. The timetable will be saved. The record list will include the name of this new timetable.

8.6   Frame types

As the functionality offered by FacilityPro Manager for frames is not used on most sites, the menu frame types, and the tab 'Frames' on the cards and user groups data screens is invisible by default. To use frames you must change the level of authorisation for frame types for the administrator group that you belong to.

A frame is a memory-space on a card that can be used to store any information that the administrator would like to have stored on the card. This could for example be the user group of the card holder, the card holder's blood type, the number of the site to which the card belongs, other text, a membership number through which the card can be linked to other systems (e.g. library), or other medical information. Per user group we define how many frames there will be on the cards of that user group (§3.4.2.2). To determine the data that will be written to a frame, a frame type is assigned to that frame.

Usually a frame type is assigned to a frame of a user group (§3.4.2.2). All the cards of that user group will then have the same information in that frame. This provides enough functionality for most sites. It is also possible to assign a frame type to a frame of a specific card, and add specific data to be saved in that frame of that card (§3.1.2.1). That frame type

must have the value 'Cards' in the field 'Table' and may not have a value in the field 'Field' (§8.6.1) and must first have been assigned to a frame of the user group of that card (§3.4.2.2).

The data that is written in frames on a card can be of several types:

1) Data entered at site level: data entered into the field 'Data' of the frame type: all cards on the site of all user groups to which this frame type is assigned will have the same data in the frame to which that frame type is assigned.
2) Data entered at user group level: data entered into the field 'Data' of the frame of a user group to which a frame type has been assigned: all cards of that user group will have the same data in that frame. The field 'Table' of the frame type must have the value 'User groups' and the field 'Field' must be empty.
3) Data entered at the card level: data entered into the field 'Data' of the frame of a card to which a frame type has been assigned: only that card will have that data in that frame. The field 'Table' of the frame type must have the value 'Cards' and the field 'Field' must be empty.
4) Data extracted from the database: data extracted from any of the fields of the user groups table, the card holders table or the cards table of the database of FacilityPro Manager. This is done by assigning the field name to the field 'Field' of the frame type.

On the frame types data screen, the record list is a list of all the frame types. From this screen you can view, create, edit, and delete frame types.

8.6.1 Creating a frame type in the database

The fields of the data entry area of the frame types data screen are listed and explained below. The fields marked * must be assigned a value:

1) Frame type: the name of the frame type.
2) Data type: the type of data that will be written in a frame on all the cards of all the user groups to which this frame type is assigned. T = text, left aligned; N = numeric; R = text, right aligned.
3) Table: this field can be empty or have one of the following values: 'User groups', 'Cards' or 'Card holders'. The value indicates from which table of the database data can be extracted and written in the frames to which this frame type is assigned. This field must have the value 'Cards' if you want to be able to assign this frame type to individual cards (§3.1.2.1). It must have the value 'User groups' if you want to enter data in the field 'Data' of a frame of the user groups to which you assign this frame type (§3.4.2.2).
4) Field: a field from the table entered in the field 'Table'. The value of this field will be written in a frame on all the cards of all the user groups to which this frame type is assigned. This field must be empty if you want to be able to assign this frame type to individual cards (§3.1.2.1) or if you want to enter data in the field 'Data' of a frame of the user groups to which you assign this frame type (§3.4.2.2).

5) Data: in this field you can enter data. This data will be written in a frame on all the cards of all the user groups to which this frame type is assigned.

How to create a frame type:

1. Choose menu **Configuration**.
2. Choose **Frame types**. You will see the frame types data screen (Figure 8-21).
3. Click New.
4. Click in the field 'Frame type'.
5. Type the name of the new frame type.
6. Click the arrow next to the field 'Data type'.
7. Select the correct data type.
8. If you are defining a frame type for which you want to type data in the field 'Data' at the user group level, click the arrow next to the field 'Table' and select the value 'User groups'.
9. If you are creating a frame type for which you want to type data in the field 'Data' at the card level, click the arrow next to the field 'Table' and select the value 'Cards'.
10. If you are creating a frame type that will extract information from a field of the database of FacilityPro Manager, click the arrow next to the field 'Table' and select the name of the table in the database from which you want the data to be extracted.
11. If you are creating a frame type that will extract information from a field of the database of FacilityPro Manager, click the arrow next to the field 'Field' and select the name of the field from which you want the data to be extracted. The pull-down menu will show the fields of the table selected in step 10.
12. If you are creating a frame type for which you want to type data in the field 'Data' at the site level, click in the field 'Data' and type the data that you want to be written in a frame on all the cards of all the user groups to which this frame type is assigned.
13. Click Apply.
14. Click OK. The new frame type will be saved. The record list will include the name of this new frame type.

Figure 8-21 The frame types data screen

9   Help

FacilityPro Manager offers on-screen help. The entire content of this manual is made available to you in an Adobe pdf format on screen (of course, you can also always refer to this manual).

How to start FacilityPro Manager help function:

1. Choose menu **Help** and Choose **Help** or **p**ress **<F1>** from any screen of FacilityPro Manager. The text of this user manual will appear in pdf format.
2. Scroll to the desired chapter or paragraph using the scroll bar on the right to find the information you need.

9.1   Error messages and problem solving

9.1.1   Cardconfig: group or site data not complete

Error:
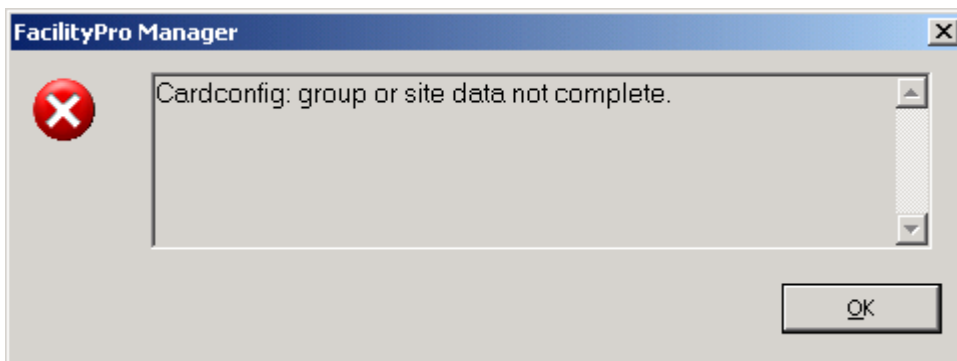
Cause:
Essential site data (site code (§8.1.1), security keys (§8.1.2.3)) or user group data has not yet been entered into the database.

9.1.2 Cardinterface: no keys for keyversion1

Error:
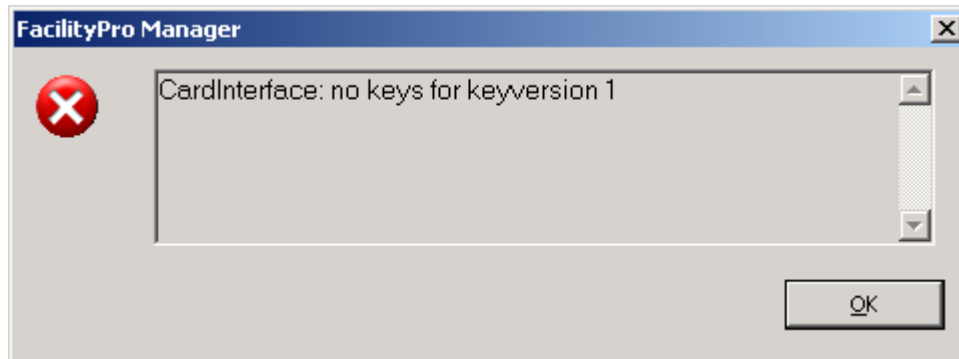
Cause:
Security keys (§8.1.2.3, fields "Paymentmasterkey1" and "Servicemasterkey1") have not yet been entered into the database.

9.1.3 Card could not be modified/Error opening card reader

Error:
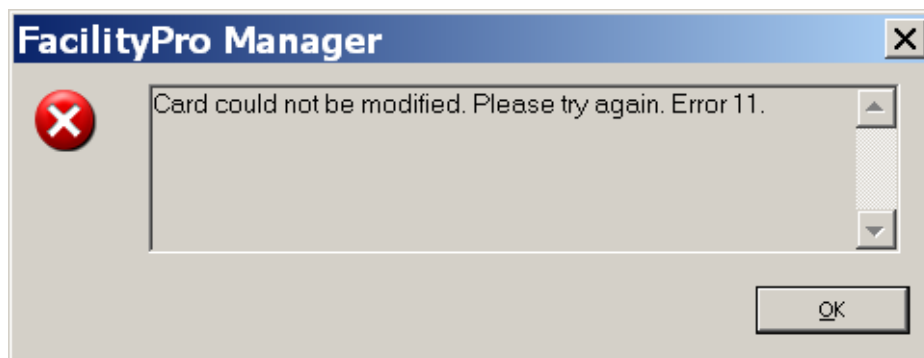
or
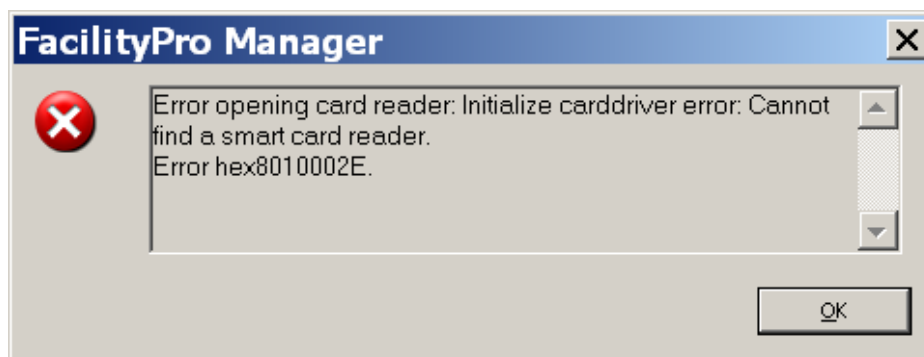
Cause:
Card reader (Omnikey, Felica, Legic or other) was not properly installed or is not connected.

9.1.4 Wrong number of frames

Error:
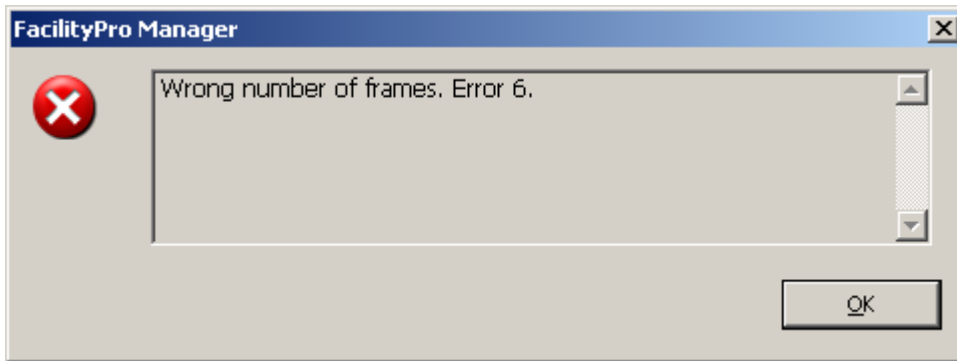
Occurs when trying to write a card.
Cause: the value of the field 'Frames' of the user group the card you are writing belongs to, cannot be written to the card. Mifare cards allow either 0 or 2 frames to be written. The number of available frames on a card depends on the type of card used. Double-check the maximum number of frames before changing the field 'Frames' of a user group.

Solution: change the value of the field 'Frames' of the user group the card you are writing belongs to to a number that is accepted by the type of card you are trying to write to.

9.1.5 Card is not initialised

Error:
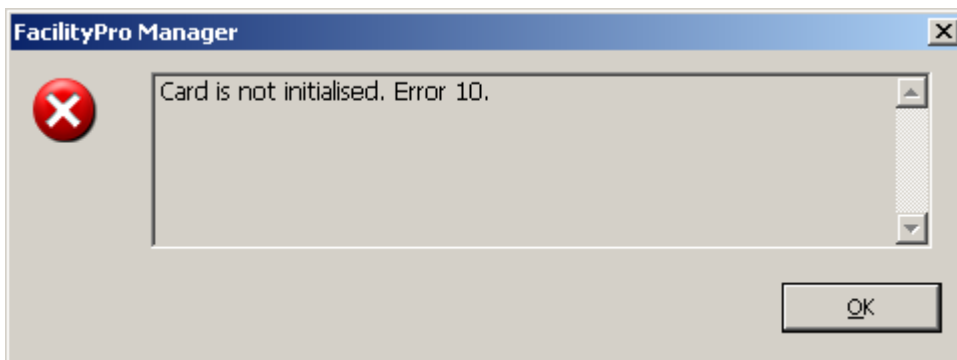
Cause:

Solution:

9.1.6 Wrong static signature

Error:

Cause:
Either the card has become unusable or the security keys have been mismanaged.
Solution:
Try rewriting the card. If this fails, discard card and use new card.

9.1.7 Wrong site keys

Error:

Cause:
The keys that have been read from the card cannot be found in the database.

9.1.8 Wrong site code

Error:

Cause:
The site code read from the card does not match the sitecode of the database.

MAGNA CARTA

10 The menu 'File'

FacilityPro Manager offers a number of special functions for importing data into the database, exporting data from the database, changing data in the database by running an SQL database script and updating the database from an earlier version of FacilityPro Manager.

10.1 Importing data into the database

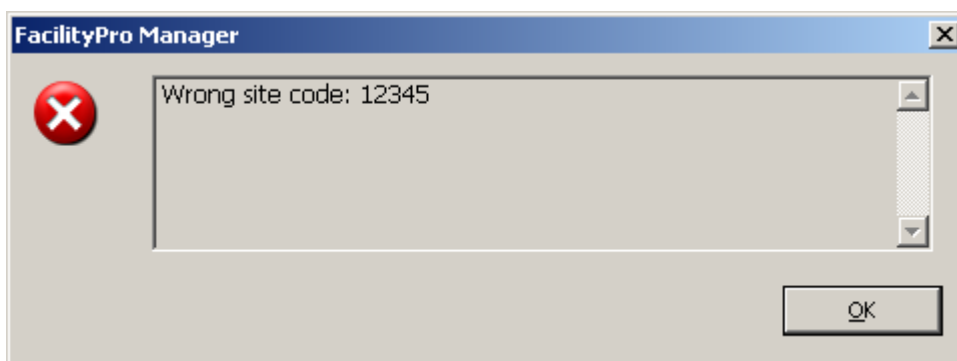In the menu **File**, FacilityPro Manager offers the menu option Import, which you can use to import a table, reports or an entire site into FacilityPro Manager's database. This can only be done by administrators with sufficient level of authority for 'Tools' (§8.3.1).
You will generally only use this function if you used another electronic transaction system before you started using FacilityPro Manager, and you need to import the data of your previous system into FacilityPro Manager. The Import function is also used to import card holders into the database from a users.dbf file in Dbase or Paradox format.
If data needs to be imported into the database of your site, the dealer who has supplied FacilityPro Manager and installed the electronic system at your site will normally do this for you. How this is done exactly, depends on the format of the data that needs to be imported.

Importing is done in FacilityPro Manager with the menu choice: File\Import\Import table.
The file <IMPORT.DLL> is needed for importing. This file is saved in the directory c:\FacilityPro\bin when FacilityPro Manager is installed.

10.1.1 Importing cards and card holders

Cards and card holders can be imported from an **Excel** sheet (file with .xls extension), a **dBase 3 or 4** table (file with .dbf extension), a **Paradox** table (file with .db extension) or a **CSV** file (file with .csv extension) if the file has been adapted and has the correct file structure (see below).

The import is done in FacilityPro Manager with the menu choice: File\Import\Import table.
The file <IMPORT.DLL> is needed for importing. This file is saved in the directory c:\FacilityPro\bin when FacilityPro Manager is installed.

Before you import the data you must ensure that the database of FacilityPro Manager has user group records and cost centre records for all the user groups and cost centres that are in the file to be imported.

Table 10-1 presents an overview of the fields that must or may exist in a file that is to be imported into FacilityPro Manager. Fields marked with an * **must** exist and **must** be filled in. The other fields may exist, and may be filled in. The names of the fields in the file must be identical to the names in Table 10-1. If the fields in your file have other names, they must be edited. Table 10-1 also gives information about the maximum length if fields, whether the field must be numeric, and the range that the values can have. The order of the fields is not

important. If there are fields in your file that contain information that must not be imported into the FacilityPro Manager database, these fields (columns) must be removed. You can choose to import the information contained in two fields into the fields 'Extra1' and 'Extra2' of the database. If the field 'Cardnr' exists and has data, a card will be created in the database for each imported card holder with the corresponding card number (obviously, the card numbers must be unique and may not already exist in the database). If the field 'Cardnr' exists and has no data, a card will be created in the database for each imported card holder with an automatically created unique card number. If the field 'Cardnr' does not exist, no cards will be created in the database when importing the card holders. If the field 'Cardnr' exists and the fields 'Surname' and 'Name' do not exist, only card records will be imported and not card holder records. The field 'Extern' should only exist if the field 'Cardnr' exists and will then be imported into the field 'External card number' of the card.

If you want to import an Excel spreadsheet the field names must be in the first row of the spreadsheet (so a field name is at the top of a column) and the data in the subsequent rows. All fields must be formatted as text except the fields in the columns 'Cardnr' and 'Extern', which should be formatted as numeric with 0 decimals.
If you want to import a CSV file, it must be .... And have a header with the field names. If there is no header with the field names, there must be a scheme information file *schema.ini*.

Field	Maximum length/range	Required field type	Required fields
Name	20 characters		* (this field is not required if the field 'Cardnr' exists)
Surname	30 characters		*(this field is not required if the field 'Cardnr' exists)
Usergroup	1 -> 999 or 30 characters	Numeric if this field contains the User group ID and text if this field contains the User group name	*
Costacnt	1-> 99.999.999 or 30 characters	Numeric if this field contains the Cost centre ID and text if this field contains the Cost centre name	*
Middle	15 characters		
Address	150 characters		
Postcode	7 characters		
Phone1	15 characters		
Phone2	15 characters		
Perscode	10 characters		
City	20 characters		
Country	20 characters		
Extra1	25 characters		
Extra2	25 characters		
Gender	1 character		

Field	Maximum length/range	Required field type	Required fields
Cardnr	1 -> 99.999.999	Numeric	* required if fields 'Surname' and 'Name' do not exist. If this field exists and has a value, card records will be created. If this field exists and has no value, cards will be created for which automatic card numbers will be generated
Extern	1 -> 99.999.999	Numeric	Only in combination with the field 'Cardnr'
Cardstatus	1 -> 4	Numeric	Only in combination with the field 'Cardnr'
Issuenr	1 -> 15	Numeric	Only in combination with the field 'Cardnr'

Table 10-1 Fields that can be included in a file with card holders to be imported

Explanation of the field in Table 10-1:

Name	First name/initials
Surname	Last name
Usergroup	Usergroup ID (if numeric field) OR Usergroup name (if text field)
Costacnt	Cost centre ID (if numeric field) OR Cost centre (if text field)
Address	Address
Phone1	Telephone number 1
Phone2	Telephone number 2
Perscode	Personnel code
City	City
Country	Country
Extra1	Extra field
Extra2	Extra field
Gender	Gender
Cardnr	(internal) Card number (the actual smartcard number; must be unique)
Extern	External card number (can be printed on the card)
Cardstatus	0=no card, 1=personalised, 2=issued, 3=hotlisted, 4=blocked
Issuenr	the issuenumber of the card

If the field Cardnr exists (whether or not it contains data), card records are created in the Card table (and, if the field External exists, the value of the field External is saved in the field 'External cardnumber'). If you want FacilityPro Manager to create cards for you and assign card numbers to those cards, you can therefore add the field Cardnr to the table to be imported, and leave the field empty. The card numbers generated will comply to the system used by default in FacilityPro Manager for automatic generation of card numbers: card

number = 100,000*[user group ID]+[unique following number]. The unique following number will be one higher than that of the previous card generated in that user group.

In general you will have to add the fields 'Usergroup' and 'Costacnt' to the file to be imported, and fill in the user group and the cost centre for each card holder. If you do not use cost centres on your site, you can assign the value '1' to the field 'Costacnt' for all card holders.

How to import a file with card holders into the FacilityPro Manager database:

1. Make sure that there are user group records and cost centre records for all user groups and cost centres that are in the file that you want to import.
2. Choose menu **File**.
3. Choose **Import**.
4. Choose **Import table**. A standard Windows 'Open' dialog screen will appear.
5. Select the file that you want to import in the usual Windows manner. See above for conditions the file should meet.
6. Click Open. You will see the message 'Filter: import.dll. Continue?'. If you see the message 'No filter found', the file you are importing does not meet the conditions specified above or FacilityPro Manager cannot find the file <import.dll> in the folder c:\FacilityPro\bin. This file should have been saved in that folder when FacilityPro Manager was installed. Ask your dealer to send you the file, save it in the folder and try again.
7. Click Yes. The file will be imported.

10.1.2 Importing user groups and cost centres

User groups and cost centres can be imported from a **dBase 3 or 4** table (file with .dbf extension) or a **Paradox** table (file with .db extension) if the table has been adapted and has the correct file structure (see below).
The following data can be imported:
1) User groups only: the file must contain a column 'usergroupname' or 'usergroup'; user group records will be created.
2) Cost centres only: the file must contain a column 'costaccountname' or 'costacnt'; cost centre records will be created.
3) User groups and cost centres: the file must contain the columns 'usergroupname' and 'costaccountname' or 'usergroup' and 'costacnt'; user group records and cost centre records will be created. They are not related, i.e. a cost centre in the same row as a user group will not be set as the standard cost centre for that user group.
4) User groups, cost centres and tokens: the file must contain columns 'usergroupname' and 'costaccountname' or 'usergroup' and 'costacnt; each row in the import file will refer to one cardgroup or user group/cost centre combination. User group records and cost centre records will be created, as well as the corresponding token records per user group/cost centre combination.

Field	Field, short name (dBase)	Type (max)	Description (*= required field)
usergroupid	usergroupid	Number (8)	User group ID

Field	Field, short name (dBase)	Type (max)	Description (*= required field)
usergroupname	usergroup	Char (30)	*User group name (not required if no user groups are imported)
startdate	start	Date	Starting date for the validity period for a user group
enddate	end	Date	Ending date for the validity period for a user group
validperiod	period	Number (4)	Number of days for the validity period for a user group
startbalance	startbal	Number (4)	Starting balance for a user group
maxcredit	maxcred	Number (4)	Maximum balance for a user group
defaultcostaccount	defcost	Number (4)	Default cost centre for a user group
frames	frames	Number (1)	Number of frames (0 or 1)
costaccountid	costid	Number (4)	Cost centre ID
costaccountname	costacnt	Char (30)	*Cost centre name (not required if no cost centres are imported)
cardgroupid	Cardgid	Number (4)	if tokens will be imported (field 'tokenid' exists in the import file) and this field is not included, cardgroupid values will be generated
tokenid	tokenid	Number (4)	
tokens	tokens	Number (2)	

Table 10-2 Fields that can be included in a file with user groups and/or cost centres to be imported

10.2 Exporting data from the database

Using the export menu you can export the cards and/or the user groups to a .dbf, .db or .xml file (.xml is recommended). This can only be done by administrators with sufficient level of authority for 'Tools' (§8.3.1).
You can indicate which cards to export, and must specify to which file you want the data to be exported. In this way, you can export data from one database and subsequently import the data into another database.

10.3 The menu option 'Run database script'

In some cases it might be desirable to change the data in the database by running an SQL database script. This can only be done by administrators with sufficient level of authority for 'Tools.run database script' (§8.3.1). It is outside the scope of this manual to discuss this topic in detail. Administrators with sufficient knowledge of SQL will be able to write scripts to run, and in some cases a database script might be supplied by your dealer to fix problems, and this menu option can be used to execute it. For obvious reasons it is important to ensure that only the appropriate administrators have the authorisation to use this menu option.

10.4 The menu option 'Database upgrade'

When you open FacilityPro Manager and the database used was never opened with this version of FacilityPro Manager before, a database upgrade will generally be executed automatically, and you will see a warning message as in Figure 10-1. In some cases, you might want to run a database upgrade manually. This can be done from the menu File, Database upgrade. This can only be done by administrators with sufficient level of authority for 'Tools.run database script' (§8.3.1).
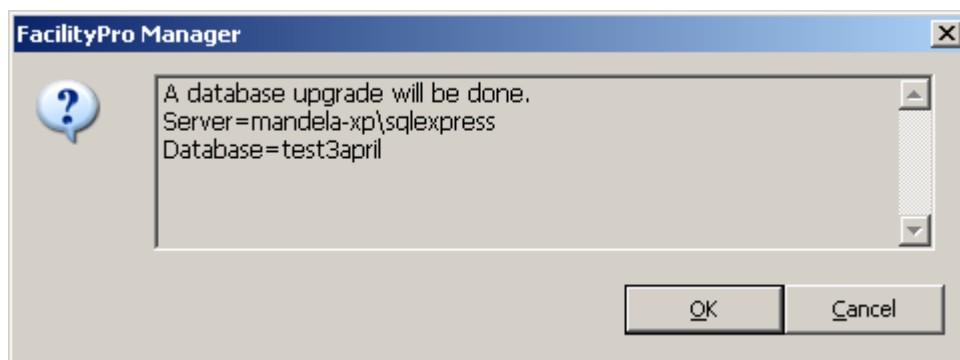

Figure 10-1

11 Building a database

Generally the dealer that supplied FacilityPro Manager to you will carry out the installation of the program on the workstations, the set-up of the program according to the requirements of the site, the installation of the terminals at the dispensers of the site, etc. These are tasks that have to be done only once, after which changes to the site configuration need to be made only irregularly, for which the supplier might also be called in. The FacilityPro Manager administrators will therefore most likely not gain much experience with these tasks. It will better their understanding of the system, however, if the administrators know how these tasks are carried out. This chapter describes the steps of setting up the database for a site. Filling a database should be done in the correct order, as set out below.

For day to day management of a site that is up and running, the menus of FacilityPro Manager will generally be used from left to right and from top to bottom. For setting up a completely new site, however, one will use the menus roughly in the opposite direction, from right to left and from bottom to top. This is because the rough design of the site has to be implemented before the detailed data can be entered.

How to set up the FacilityPro Manager database:

1. Install FacilityPro Manager on the collector workstation (see FacilityPro Manager Installation Manual).
2. Install FacilityPro Manager on other workstations, if desired (see FacilityPro Manager Installation Manual).
3. Install a PC card reader on the workstations if desired (see FacilityPro Manager Installation Manual).
4. Edit the login name and the password of the standard administrator ('customer') thereby defining a login name and password for future use of FacilityPro Manager. Close down FacilityPro Manager and start the program using the new administrator login.
5. Define the administrator groups.
6. Define other administrators.
7. Create the frame types.
8. Create the timetables.
9. Fill in the tab 'Collector' for the collector workstation.
10. Fill in the tab 'PC card reader' on the workstations with a PC card reader.
11. Enter the basic data of the site on the site options data screen.
12. If you have connected a PC card reader to any of the workstations, execute the action button Read Cardkeys file on the tab 'Settings' of the site options data screen (§8.1.1.2) on any one of the workstations.
13. Create the product groups.
14. Create the products.
15. Create the rights.
16. Create the machine suppliers.
17. Create the locations.

18. If necessary, create the machine types (a number of machine types common for electronic transaction systems will be included in the database at installation).
19. Create the terminal groups.
20. Create the terminals.
21. Create the zones.
22. Create the cost centres.
23. Create the user groups.
24. Assign the appropriate rights to the user groups.
25. Assign the appropriate frame types to the user groups.
26. Assign the appropriate zones to the user groups.
27. Create the card holders.
28. Create the cards.
29. Assign the appropriate zones to individual cards.